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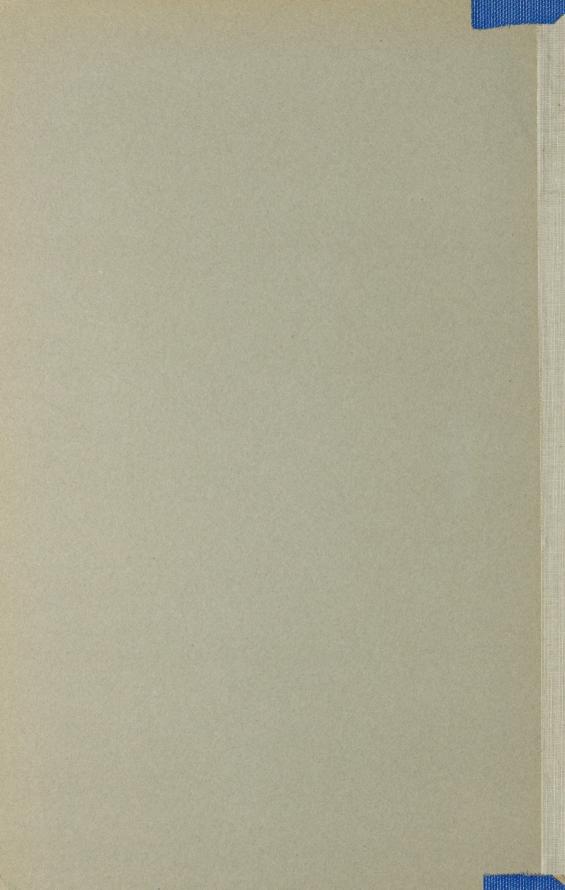
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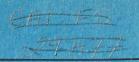
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Report of the Hudson Strait Expedition, 1927-28.









# REPORT OF THE HUDSON STRAIT EXPEDITION

1927-28

N. B. McLean, Officer in Charge



OTTAWA
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A. Johnston, Esq.,
Deputy Minister of Marine,
Ottawa.

Sir,—I have the honour to submit herewith the following report on the Hudson Strait Expedition from February 11, 1927, the date of my appointment as officer in charge, until the final return of the expedition to Quebec, November 14, 1928.

In the preparation of this report, I have endeavoured to give a clear and concise account of the work of the expedition, and by avoiding a mass of detail to present it in a form that may be of interest to the general public.

Several complete copies of the reports of the officers in charge at the different bases have been prepared for those who may require more particulars. These reports give the details of the work as carried out from day to day throughout the period that the expedition was at the strait, together with copies of all photographs taken.

These detailed reports will be available at the Department of Marine and Fisheries, Department of Railways and Canals, and Department of National Defence.

Permit me here to acknowledge the kindly and valuable assistance afforded me by yourself and the officers of your department, and also by the officers of the Royal Canadian Air Force, and the officers of the Department of Railways and Canals.

It gives me great pleasure to say that the credit for the successful carrying out of the work during the sixteen months the expedition was absent was due to the untiring efforts of the personnel; their cheerful attention to orders and willing co-operation, at times under very trying conditions, deserves the highest praise.

It is also a pleasure to say that the vigorous whole-hearted work of the crews of the C.G.S. Stanley under Captain John Hearn, in 1927, and the C.G.S. Montcalm, under the same officer in 1928, helped in no small measure to make the expedition a success.

During the period that the expedition was absent there were only minor accidents and very little sickness, consequently it is a great satisfaction to be able to report the whole of the personnel returned—all safe and all well.

Your obedient servant,

N. B. McLEAN,
Officer in Charge, Hudson Strait Expedition of 1927-28.

# LIST OF SOME OF THE TERMS USED IN ICE NAVIGATION BY WHALERS, SEALERS AND OTHERS

FLOE—a large mass of floating ice.

Pan—a small floe or small piece.

A FIELD—a large body of ice that may be seen around.

LAND FLOE—ice frozen fast to the shore.

PACKED ICE—are small pieces closed together and held by the pressure of ice and currents.

THE ICE PACK—is that large body of solid ice extending across the whole sea and beyond which it is impossible to advance.

SLACK ICE—is detached so that it can be worked through.

Running Abroad—ice that opens out or slacks away so as to be navigable.

A Lead—is a strip of navigable water opening into the pack.

HUMMOCKY ICE—is rough uneven or thick ice.

Slob—is snow afloat and forming into ice.

RAFTING—occurs when two pans meet with force either by the action of the winds or currents the edges are broken off and either rise on top of or pass under the body of the pans.

PRESSURE RIDGE—is the ridge thrown up while the ice has rafted.

Growler—is a more or less washed and rounded lump of ice which rolls about in the water, formed from broken pieces of heavy old Arctic floe ice.

COLLAR ICE—is the margin of ice frozen fast to an island or shore, presenting an abrupt wall against which the floating ice rises and falls with the tide.

# **Hudson Strait Expedition, 1927-28**

### OBJECT OF EXPEDITION

The decision having been reached by the Government to complete the Hudson Bay railway and terminals, it was decided, early in January, 1927, to send an expedition to Hudson strait to obtain accurate information in regard to ice conditions, and to study the requirements necessary to ensure safe navigation.

The Government laid down the general lines on which the expedition was to be conducted, viz., the establishing of several airplane bases in the strait, with

all the necessary equipment for a period of sixteen months.

An Order in Council (P.C. 85) dated January 22, 1927, provided for an Advisory Board consisting of three members, one from each of the departments concerned, viz., Marine and Fisheries, National Defence, and Railways and Canals. I had the honour to be appointed chairman of this board and officer in charge of the expedition, representing the Department of Marine and Fisheries, with Mr. E. B. Jost, C.E., the Department of Railways and Canals, and Group Captain J. Stanley Scott, Royal Canadian Air Force, the Department of National Defence and later by Wing Commander J. L. Gordon of the same department when Group Captain Scott was transferred to another branch of the Air Force.

This board met for the first time on February 4, 1927, and continued to meet regularly until June 28, and was responsible for the organization of the expedi-

tion up to the date of its departure from Halifax.

### GENERAL PLAN OF OPERATIONS

The general plan of operations as worked out by the Advisory Board made provision for three bases, one at the east end of the strait, one at the west end and one half-way between these two. This plan was finally accepted by the Deputy Ministers of the Departments of Marine and Fisheries, Railways and Canals, and National Defence.

# EQUIPMENT AND STORES

On February 11 authority was granted for the purchase of supplies generally. The placing of orders for stores, materials and equipment began almost immediately afterwards and continued until a day or so before the expedition left Halifax. Arrangements were made for the use of Shed 22, Ocean Terminals, Halifax, and all the material belonging to the expedition was eventually assembled there.

A contract was made for the building materials all cut and fitted ready to set up, and another contract was arranged for their erection at the different bases.

The general equipment of the three bases was practically the same and the following list is characteristic of any base:—

- 2 Fokker airplanes, complete with floats, skiis, and wheels for landing, and all necessary accessories, including spare engine.
- 1 30-foot motor launch.
- 1 Fordson tractor.
- 7 buildings, comprising officer's dwelling, men's dwelling, radio building, storehouse, blubber house, and two hangars.

Bricks, sand in bags, cement in barrels.

Radio apparatus-2 gasolene engines to generate power with 2 150-foot steel masts.

326 drums of gasolene (45 gallons each).

38 drums of coal oil.

125 cases Ethyl airplane spirits (8 gallons to a case) 125 cases lubricating oils (eight gallons to a case).

160 tons hard coal in bags.

Stoves, beds and bedding, clothing.
Provisions for sixteen months.
Dishes and cooking utensils.

2 dories.

1 Vercheres skiff.

1 Vercheres skiff.
Guns, rifles and ammunition.

Meteorological instruments.

It may be here stated that after the bases had been established it was found that no essential had been omitted.

### TRANSPORTATION.

For transporting the men and equipment to Hudson strait the C.G.S. Stanley, an ice-breaker, after being strengthened and generally repaired, was put at the disposal of the expedition, and the SS. Larch, a freighter of 3,564 gross tons was chartered.

### LOADING.

Loading began at Halifax July 4 and was completed July 16, the Stanley being a small vessel was only able to take care of her own stores and passengers, while the Larch carried 2,700 tons of coal intended for both ships, as well as 2,585 tons of general cargo.

### DEPARTURE FROM HALIFAX.

On July 17 at 3 p.m. the Stanley with her consort the Larch left Halifax with all the members of the expedition on board and proceeded to sea. The Stanley carried the personnel of the expedition consisting of 39 all ranks, 4 electricians, the building inspector, and also the following crew under Captain John Hearn, Master, and Albert Theriault, Chief Engineer:-

- 1 Chief Officer.
- 1 Second Officer.
- 1 Third Officer.
  - 3 Quartermasters.
  - 1 Boatswain.
- 1 Boatswain's Mate.
  - 1 Carpenter.
- 11 Seamen.
- 1 Chief Wireless Operator and Purser.
- 1 Assistant Wireless Operator.
  - 1 Second Engineer.
  - 1 Third Engineer.
  - 1 Fourth Engineer.
  - 1 Fifth Engineer.
  - 3 Oilers.
  - 9 Firemen.

  - 6 Trimmers.
    1 Chief Steward.

1 Second Steward.

2 Assistant Stewards.

1 Chief Cook.

1 Assistant Cook.

The Larch, with Captain Balcom as Master, had on board a construction crew of 46 men, 6 riggers, 1 timekeeper, 2 cooks, 2 assistant cooks and her own crew of 28 men.

### PERSONNEL OF EXPEDITION.

N. B. McLean—Officer in Charge. J. R. O'Malley—Secretary.

# Base "A."

Officer in Charge-

Flight Lieut. F. S. Coghill, R.C.A.F. Flying Officer A. Lewis, R.C.A.F. Medical Officer—Dr. H. Edgar Kelley. Radio Engineer—Clifford A. Wilson.

Wireless Operator-D. Paquette.

Flying Personnel—

Flight Sgt. Terry, R.C.A.F. Sgt. P. Semple, R.C.A.F. Corp. Kirkcaldy, R.C.A.F. Corp. Torrie, R.C.A.F. Sgt. Hall, R.C.C.S.

R.C.M.P.—Constable Montague. Storekeeper—Albert Fuller. Cook—E. H. Congdon.

Base "B."

Officer in Charge—

Flight Lieut. A. A. Leitch, R.C.A.F. Flying Officer A. J. Ashton, R.C.A.F.

Medical Officer—Dr. Wickwire. Radio Engineer—G. F. Hudon. Wireless Operator—R. L. Hunt.

Flying Personnel— Flight Sgt. Wm. Ramsden, R.C.A.F.

Sgt. W. Keighley, R.C.A.F. Corp. D. B. Chambers, R.C.A.F.

Corp. F. J. Ewart, R.C.A.F. Sgt. Major Pearson, R.C.C.S.

R.C.M.P.—Corp. F. McInnis. Storekeeper—Edmond Lefebre. Cook—J. J. Bond.

# Base "C"

Officer in Charge—

Squadron Leader T. A. Lawrence, R.C.A.F. Flying Officer B. Carr-Harris, R.C.A.F. Medical Officer—Dr. W. J. K. Clothier. Radio Engineer in Charge—H. E. Walsh. Assistant Radio Engineer—Wm. Laurie, R.C.C.S. Wireless Operator—A. E. Axcell. Photographer—Geo. Valiquette.

Flying Personnel—
Flight Sgt. G. Black, R.C.A.F.
Sgt. A. Caggie, R.C.A.F.
Corp. A. H. Warner, R.C.A.F.
Corp. J. F. Riggs, R.C.A.F.
Corp. Bulteel, R.C.C.S.
R.C.M.P.—Constable James Murray.
Storekeeper—Romeo Lemieux.
Cook—J. Dorey.
Assistant Cook—James Dacey.

### WORK OF ESTABLISHING BASES

The details of this work are given in Appendix No. 1, log of C.G.S. Stanley.

### SYSTEM AT BASES

A reconnaisance was first made with the small Moth plane carried aboard the Stanley for that purpose and a report made by air officers on any apparently suitable site found. This was checked on shore and if satisfactory adopted. It may here be said that the Moth plane proved most useful and saved the expedition a very great deal of time and labour. After the site has been selected the beach was improved where necessary and tractors, slipway and derricks sent ashore, the slipway being laid down and the derricks set up. Materials and stores of all kinds were discharged to the beach in surf boats and the small scow which had been provided. This scow proved to be also a very valuable adjunct to the expedition on account of its capacity for carrying heavy loads or cumbersome loads such as wing cases. Surf boats were unloaded at the beach to stone boats or jumpers, which in their turn were hauled by the tractors to the position where they were required, the lumber for instance all being sorted as it came ashore was taken to the site of the building for which it was intended. It may be said of the tractors that had they been omitted making it necessary to manhandle all the materials and equipment it is entirely unlikely that the work could have been completed before the winter set in. It should be mentioned that the building material had all been cut to size and put up in bundles properly marked. The erection of the buildings was begun as soon as possible and an effort made to get one or two roofed so that the personnel and construction crew could be under cover and fairly comfortable before the departure of the Stanley and Larch for the next station. When the cargo was discharged the ships proceeded to the next base leaving a certain number of the construction crew and the personnel to complete the work.

# DESCRIPTION OF BASES

### BASE "A "-PORT BURWELL

Base "A" is situated at Mission Cove and Fox Harbour, Port Burwell. Mission Cove lies in the Northwest arm of Port Burwell Harbour, the inner end being about one-half mile from the anchorage. Fox harbour which leads in a northwesterly direction to Hudson strait is separated from Mission Cove by a bar which may be crossed for about three hours at the high stage of the tide. Owing to the lateness of the season and the difficulties of the terrain it was decided to rent the Old Mission building belonging to the Hudson's Bay Company for the housing of the personnel, to erect the power house near it, and to build the hangars and storehouse about one-third of a mile away at Fox Harbour.

Considerable difficulty and delay was experienced at this base as there were a great many boulders that had to be removed before the foundation sills could be laid. Flying operations were conducted from Fox Harbour, the planes being launched and landed there.

### BASE "C"-WAKEHAM BAY

Wakeham Bay on the south side of Hudson Strait about half-way between Port Burwell and Nottingham Island was selected as the site for Base "C." The buildings were erected on the east side of the bay half a mile from the Hudson's Bay Company's post and slightly further from the post of Revillon Freres. The bay abreast of the station is about four miles in width, decreasing to a mile and a half at the entrance, which is approximately eight miles to the north. The buildings were all erected in a small meadow sloping slightly to the beach with a fine stream of water on one side. The hangars were placed just above extreme high water mark and planes could be launched at any stage of the tide as the beach has been improved. The situation generally was satisfactory, the buildings being conveniently located and at sufficient distance apart to provide for safety in case of fire.

# BASE "B"

Base "B" was located at the southernmost corner of Nottingham Island about one-half mile from the mouth of an inlet running approximately north and south. This inlet as well as being excellent for taking off and landing also provides excellent shelter. The buildings were erected in a small meadow sloping towards the inlet and completely surrounded by low hills and ridges. The hangars here were also placed as near the high water mark as possible for convenience in launching the planes. The general situation at this base was better than at either of the others as there is less rise and fall of tide and better shelter for buildings and planes.

### COMPLETION OF BASES

The work of establishing all the bases was completed by November 11, 1927, and on this date the C.G.S. *Stanley* left Port Burwell bound for Halifax, and after a stormy experience on the Labrador coast, arrived at Quebec on November 25 in a more or less battered condition. The details of the work performed by this vessel are given in Appendix No. 1 "Log of C.G.S. *Stanley*."

# FLYING OPERATIONS

The first flight was made from Base "C," September 30, from Base "B," October 11, and from Base "A," October 19. The planes were in the air after these dates whenever the weather was favourable and it was considered advisable. These flights might have been commenced earlier, but as it was known that there was no ice, every effort was made to get the personnel under cover as soon as possible.

Details of the flying operations are given in Appendix No. 9, "Ice Obser-

vations at Bases A, B, C—1927-28.

This report deals only with dry facts and actual results obtained. To the uninitiated it might appear to be all very simple, though actually it was quite the reverse. It does not seem inappropriate that something should be said in regard to the grave hazards that were continually being undertaken by the officers doing the work, flying as they did under very uncertain weather conditions and over rough rocky country or hummocky broken ice where safe landings were almost an impossibility. Nothing has been said concerning the crew

that passed the night on drifting ice off Nottingham Island and reached their base next morning with about a pint of gasoline in their tanks; or of the plane from Wakeham Bay, engine of which stalled over the rocks in thick weather, and yet got down safely; or of the number of times different crews were caught in snow or fog. Nor again has anything been said of the two from Burwell with an Esquimo who landed 60 miles out in the Atlantic, taking eight days to fight their way back to the Labrador coast and six days more to their Base, subsisting mainly on raw walrus, with not too much of that; neither has it been told of the wonderful flights made by officers from Nottingham Island and Wakeham Bay to come to the rescue of their comrades lost in the Atlantic. These incidents occurred in the obtaining of the dry facts for this report and deserve to be recorded.

### RADIO COMMUNICATION

At each base provision was made for radio communication. At the earliest possible moment after the equipment had been discharged the power-houses were constructed, masts erected and apparatus installed.

### BASE "B"

Base "B," Nottingham Island, was arranged to operate on long wave only. On August 20, sixteen days after discharging began at Nottingham Island the first message was sent out from this station to the Stanley then in the vicinity of Big island. Communication with Port Nelson was established on August 24. From this date and for some little time afterwards messages from the expedition to Ottawa were routed through Port Nelson. The Stanley succeeded in getting in touch with Port Nelson, August 9, and on that date we received a message from the Hon. Charles Dunning, Minister of Railways and Canals, wishing us success and stating that Port Churchill had been decided upon as the terminal of the Hudson Bay Railway. Nottingham Radio Station operated on long wave to Port Nelson, Port Churchill, Wakeham Bay, Port Burwell, and through Wakeham Bay to Ottawa by short wave.

### BASE " C "

Base "C," Wakeham Bay, operated on long and short wave, working Port Burwell and Nottingham Island by the former and to Ottawa by the latter. The first message was sent out from this station to the *Stanley* at Port Burwell on September 22, twenty-nine days after unloading commenced. Communication was established with Ottawa on October 17. More time was required here for installation than at Nottingham due to the fact that both long and short wave lengths were to be used and many adjustments and readjustments had to be made.

### BASE " A "

Base "A," Port Burwell, operated only on long wave, high power. A service was maintained to Wakeham Bay, Nottingham Island, and through Father Point, P.Q., to Ottawa, Toronto and other points. Satisfactory signals were first exchanged with Father Point on November 15. Meteorological reports which are sent twice a day were all routed through Father Point or Louisburg to the Director of the Meteorological Service, Toronto, until about midsummer of 1928 when they were sent to Nottingham and from there to Mile 356, Hudson Bay Railway, and thence to Toronto.

### C.G.S. "STANLEY"

Direct communication between the *Stanley* and Ottawa after many experiments and adjustments was finally established while at Wakeham Bay and maintained with very few breaks until this vessel had arrived at Quebec. This

is a very satisfactory record as the Stanley though fitted with very fine apparatus had not nearly as good an aerial as those used on shore, and was also

subjected to much interference not encountered at the shore station.

The following records were made from the Stanley. Message sent to Ottawa and answer received in seven (7) minutes. Message sent to Ottawa, telephoned to Montreal and answer received in twenty-one (21) minutes.

# WORK DURING WINTER AND SPRING, 1927-28

After the departure of the Stanley for the south on November 11, 1927, the three bases settled down to a regular routine of work. Ice observations from air and ground were carried out, meteorological records carefully tabulated and radio communication maintained between the bases and from Wakeham Bay to Ottawa. Reports were forwarded to Ottawa daily detailing the work going on at each base together with weather conditions.

A preliminary report covering the work of the Expedition from its inception until December 31, 1927, was prepared in Ottawa and tabled in the House of Commons in February. The Advisory Board held a number of meetings and eventually it was decided by the Government to withdraw the expedition at

the end of the original period, sometime in the autumn of 1928.

In the preliminary report it was recommended that the C.G.S. Montcalm should be sent to Hudson strait early in the season to obtain accurate information as to the nature of the ice, and also that one or more Direction Finding Stations should be established during 1928. These recommendations were approved and arrangements made to carry them out. The C.G.S. Montcalm was detailed for the work and the ss. Larch was again chartered to transport freight and the construction crew. The *Montcalm* eventually left Quebec on June 24 loaded with 1,100 tons of coal, some material for a Direction Finding Station, fresh provisions, three steers and some replacement equipment for the bases, as well as a small number of men for construction work. The details of the work performed by the *Montcalm* are given in Appendix No. 1, Log of C.G.S. *Montcalm*. The ss. *Larch* left Halifax July 16 with 3,600 tons of coal for herself and the Montcalm, the materials and a year's provisions for two Direction Finding Stations, as well as a construction crew for the erection of buildings.

### WORK DURING THE SEASON OF 1928

The C.G.S. Montcalm arrived at Base "A", Port Burwell on July 3. She proceeded westward to Nottingham Island and back to Burwell through the ice supplying the Bases with fresh provisions and replacements on the way west, and on the return journey locating an excellent position for a Direction Finding Station at Cape Hopes Advance. An attempt was made to visit Resolution Island to locate site for Direction Finding Station, but on arriving off shore it was found that there was too much ice to permit of a landing, and the location of this position had to be postponed. The ship from there went to the Button Islands where a reconnaisance was made for a position for Direction Finding Station. This having been done a return was made to Port Burwell where the ss. Larch had arrived on July 24. As it was impossible for the time being to start the erection of a Direction Finding Station at Resolution Island, it was decided to go ahead with a similar Station at Cape Hopes Advance. Operations began July 28 at this point and the work was finished complete with calibration on October 9, seventy-four days from the time the first boat was unloaded. This Station gives bearings to ships through an arc of roughly 180° from East to West and these bearings cover the eastern entrance to the strait. building material, etc., was landed at Hopes Advance the Radio Station at Nottingham Island was converted into a Direction Finding Station, but owing to

bad weather conditions could not be calibrated. Sites for Direction Finding Stations were later located at Charles Island and Resolution Island. Owing to the difficulties to be overcome and the lateness of the season, no attempt was made to erect the Resolution Island Station, this work being postponed until next year. A considerable quantity of surplus supplies and stores belonging to Bases A, B, and C were sold and the remainder loaded on the Larch to be brought back. It had been the intention that the planes should fly out but as several of them were somewhat damaged at the last moment, the flight was cancelled and the planes were loaded on the ss. Larch and the ss. Canadian Voyageur to be returned to Halifax. A certain number of the personnel were sent south on the ss. Nascopie, others on the Voyageur and the remainder on the Montcalm. As it was impossible to establish a Direction Finding Station at Resolution Island the Port Burwell Wireless Station was maintained in operation so that when the Montcalm finally left in November there were three Radio Stations in the Strait, one at Port Burwell, one at Cape Hopes Advance and the third at Nottingham Island. Accurate records of ice and weather conditions will be kept at these three points and forwarded to Ottawa daily from Cape Hopes Advance by short wave.

Adverse weather conditions were responsible for very much more delay to the work than was the case during the previous season. The ss. Larch left Port Burwell bound for Halifax on October 17. After all the work was completed at Port Burwell the Montcalm on October 24 proceeded to the Button Islands anchorage as there is much better shelter there than at Burwell and remained observing ice and weather conditions until November 8, when she left for Quebec, where she arrived November 14.

# ICE CONDITIONS AS OBSERVED FROM C.G.S. "STANLEY"

On July 26, 1927, the first ice was met abeam of the Four Peaks on the Labrador coast, about 60 miles south of Cape Chidley. This ice, which would be classed as heavy open ice, was encountered more or less all the way to Nottingham Island. At certain points the ships would be in clear water but there was always ice in sight on either side. At times it was formed into narrow strings lightly packed. There was, however, nothing to prevent a commercial ship passing through, provided it was navigated with caution. With the exception of icebergs no ice was observed from August 6 until November 11, when the Stanley left the strait bound south.

# ICE CONDITIONS AS OBSERVED FROM GROUND AND AIR WINTER OF 1927-28

The first autumn ice in 1927 was reported at the different bases as follows: On November 16, floe ice off Base "B", Nottingham Island; December 3, field ice at Base "C", Wakeham Bay, and on November 30, field ice at Port Burwell, Base "A".

In regard to Wakeham Bay conditions for observing were very poor during the latter part of November and in the early part of December so it is likely that there was ice in the vicinity of this base before it was reported by actual observation.

From the time ice was first reported at the different bases, the open water gradually diminished and the ice area increased, until by January 12, 1928, at Nottingham Island, February 12 at Wakeham Bay, and February 16 at Port Burwell the ice had about reached its maximum, the proportion being, open water 10 to 20 per cent, and ice 80 to 90 per cent. Occasionally practically no open water was visible. Leads were frequently reported but did not appear to be constant as to size or locality. The above proportion of 10 to 20 per cent open water and 80 to 90 per cent ice was maintained until about May 7 at Not-

tingham, May 21 at Wakeham Bay and May 22 at Port Burwell, when it was noted that the ice was decreasing and water area increasing. On July 2, 1928, 90 per cent open water was reported between Nottingham Island and Cape Wolstenhome, and, on July 11, 2 per cent of ice. At Wakeham Bay July 23 there were only scattered pans of ice, and the Strait was clear at Port Burwell July 24.

During the period before the ice began to diminish it became very rough, hummocky, heavily piled, and rafted, as a result of the action of the wind and

tide.

Captain King reported that he travelled out on the shore floe during the winter at Wakeham Bay with dogs and komatik and that he found the ice very heavily rafted being piled in places 10 feet above the level, the hummocks made up of ice about 1 foot in thickness.

It is to be noted that the heavy Arctic ice known as the Fox Channel ice and reported by Hudson's Bay Company officials, navigators of these waters and others, as coming out sometime in October, did not come down during the

autumn of 1927.

The details of the ground and air observations are given in Appendix No. 9.

# ICE CONDITIONS AS OBSERVED FROM THE C.G.S. "MONTCALM," 1928

The C.G.S. Montcalm arrived at Base "A," Port Burwell, July 3, 1928, having met no ice, apart from icebergs on the Labrador coast or in Hudson strait. The next day at 5.10 p.m. she proceeded west. No ice was encountered until about midnight, abeam of Akpatok island. During the whole day, July 5, the ship worked through very heavy ice. The following is an extract from the Log for July 5th: "Measurements were taken to-day of one small pan, which varied in thickness from 7 feet to 19 feet. Many others were seen which undoubtedly were very much heavier. Frequently pieces were turned over which were 10 to 12 feet thick. The Montcalm, an ice-breaker, was nursed very carefully through the ice to-day. A commercial vessel having to make its way under similar conditions would be exposed to considerable risk, as vessels of this type are unable to manceuvre as well as an ice-breaker and would be in danger of having the plating badly damaged and quite possibly injuring the propellor".

On July 6 the ice was very heavy and as it was impossible to make progress towards Cape Hopes Advance, and also as there was danger of being nipped, it was necessary to shear off towards the north where there appeared to be less ice. Extract from the log for that day reads as follows: "This ice we have been meeting for the last two days would very seriously damage a commercial vessel, even if that vessel was "rung down" to "dead slow" and only touched the ice lightly, as it is exceedingly hard and heavy, there being no give to it, and it is to be treated with the utmost respect even by the best of ice-breakers."

On July 7 the ice conditions were much the same and as it was impossible to work south to Wakeham Bay the *Montcalm* was hauled north and eventually made Big island in more open ice and proceeded on a course for Charles island. Extract from log for that day: "Had to proceed 'dead slow' with utmost care." The main body of the ice was to the south, heavy open ice being along the south shore of Baffin Land.

An opening was found in the pack about abreast of Cape Weggs on July 7. The *Montcalm* passed through this opening and headed east for Wakeham Bay in open water 10 to 15 miles wide with the main ice pack 10 miles to the north. There was practically open water from King Georges Sound to Wakeham Bay.

On July 9 the *Montcalm* again proceeded west on the south side of the strait in clear water to Cape Weggs, where ice again appeared and it was necessary to shear off north of Charles island. The ice was more open as we

progressed towards Nottingham island where we arrived July 10. Provisions were discharged to Base "B" and the ship got under way again the same day headed for Sugluk Inlet, arriving there at 1 a.m. the following morning, having encountered very little ice.

July 11 and 12 the *Montcalm* was at Sugluk Inlet and Charles Island and continued eastward to Wakeham Bay July 13. Between Charles Island and Wakeham Bay there was a wide expanse of open water along the south coast,

with heavy open ice to be seen to the north in mid-strait.

The *Montcalm* remained at Wakeham Bay July 14 and 15, moving on to Diana Bay July 16. Extract from the log of this date: "About 25 miles east of Wakeham Bay we ran into widely scattered heavy ice about 12 miles off shore, much more ice to the north of us and quite a few bergs. Ice always to the north but appeared to be more open and greatly reduced from what it was when we came west."

July 17, 18, 19 and 20 the *Montcalm* remained at Diana Bay. Major Lawrence, who flew from Wakeham Bay, reported that he could see the north shore of the strait and that the only ice in sight was small bergs and growlers.

A few heavy strings of ice were encountered on the way to Port Burwell

July 21.

On July 22 the Montcalm crossed the strait to Resolution island, recrossed the same night to the Button islands and remained there two days, returning to Port Burwell July 26. On this trip only a few strings of ice of no consequence were noted

With the exception of icebergs no ice was observed from July 26 to November 8, 1928, when the *Montcalm* left the Button islands bound for Quebec.

# ICE CONDITIONS OBSERVED FROM GROUND, AUTUMN, 1928

At Nottingham Island a few small scattered pans of ice were reported on November 12 to 15 inclusive. There was no ice in sight November 16th and 17th and on November 18th the first large ice field was observed. It is probably fair to average these dates and say that the first ice occurred November 15.

The temperature of salt water on November 13th was 29·3 F. and on November 20th 28.7 F. By November 28th ice area varied from 40 to 75 per cent, on December 10th 95 per cent ice, somewhat hummocky, December 29th, 80 per cent ice.

On November 22 it was definitely reported from Nottingham island that

the Fox Channel ice was coming out.

Cape Hopes Advance reported considerable slob ice November 26, and on November 28 the first ice fields were recorded. December 11th 75 per cent

ice, December 31, heavy closely packed ice everywhere.

Mission Cove and the Harbour at Port Burwell were completely frozen over November 29. December 5 salt water ice 7-inch in thickness. December 9 newly formed closely packed ice as far as could be seen. December 15 lightly packed ice in all directions. December 24 and 30 heavy closely packed ice everywhere; December 31 clear water as far as could be seen, the ice having broken away from the shore and carried beyond the limit of visibility which was very poor for several days following.

### RECAPITULATION OF ICE CONDITIONS

Ice is formed when the air temperature has lowered sufficiently to reduce the water temperature to the freezing point. Ice at rest will increase in thickness as the temperature is lowered. Ice in motion will also increase in thickness from a lowering in temperature but will undergo a further and greater increase as a result of the ice sheets being forced one over the other by the action of the winds and currents causing rafting. All the conditions necessary for the making of heavy ice are found in Hudson strait. These conditions are low temperatures, high tides, strong currents and winds.

# MEAN MONTHLY AIR TEMPERATURES AT BASES "A", "B", "C"

1927

Base	Sept.	Oct.	Nov.	Dec.
B	38 38	29 30 32	16 19 26	0 1 11

### 1928

Base	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
B	-18	-16	- 2	7	25	39	43	44	36	27	17	5
C	-14	-13	2	12	29	39	50	49	41	25e	21e	9c
A	-10	- 9	4	18	32	41	44	46	40	30	24	15

c-Cape Hopes Advance.

### CONDENSED ICE RECORD AT BASES "A", "B", "C"

	Base "B"	Base "C"	. Base "A"		
Ice first reported 1927 Ice formed permanently Thickness of ice Maximum thickness of ice Ice began to diminish Ice gone from cove or bay Strait practically clear of ice. Ice first reported 1928	Nov. 16, 1927	Nov. 25, 1927	Dec. 3, 1927		
	Nov. 16, 19276"	Nov. 25, 1927	Dec. 3, 1927—6"		
	May 3, 192852"	Mar. 18, 1928	April 1, 1928—45"		
	June 10, 1928	May 13, 1928	April 18, 1928		
	June 25, 1928	June 28, 1928	June 20, 1928		
	July 11, 1928	July 23, 1928	July 24, 1928		

N.B.-Ice measurements taken in cove at Base "B," in bay at Base "C", and in Cove at Base "A".

From an examination of the foregoing tables giving the mean monthly air temperatures and condensed ice record for the different bases it will be seen that the lowest temperatures for the autumn and winter months were recorded at the west end of the strait and that there was a gradual rise of temperature towards the east, that the ice forms from west to east and that the strait becomes clear of ice in the spring from west to east.

As the ice forms first in the vicinity of Nottingham Island and disappears into the Atlantic ocean in the early summer between Resolution island and the Button islands, the key to the strait in the autumn is at the west end and in

the spring at the east end.

After the ice appears at Nottingham Island there is probably a certain period of time during which ships outward bound from Churchill could get through safely, especially if escorted and aided by an ice-breaker. From the information so far obtained it is impossible to make any accurate statement as to the length of this safe period. It is known that the area of the ice increases fairly rapidly, but the nature of the ice is unknown. It is reported at first as appearing to be light. The only satisfactory way of obtaining this information would be to have an ice-breaker cruising about at the west and while the new

ice was actually forming. The same procedure should be carried out at the east end in the spring, and could very advantageously be applied to the whole strait.

In regard to the opening of the strait in the early summer, it is a matter of record that on July 19, 1927, the ss. *Nascopie* of the Hudson's Bay Company, was the first vessel to proceed west, followed by the C.G.S. *Stanley* and the ss. *Larch* on July 27. In 1928, the power schooner *Morso* passed inwards July 21, arriving at Wakeham Bay, July 24, and on the same date the ss. *Larch* arrived at Port Burwell.

Taking July 19 as an opening date for the strait and November 16 when ice was first reported at Nottingham in 1927, as a closing date, we get a season of 120 days or practically four months, during which commercial vessels could

have navigated with safety and without the assistance of ice-breakers.

It must, however, be borne in mind that data obtained during two seasons only is entirely insufficient on which to base any accurate statement in regard to the opening, closing, or length of the season of navigation.

Records for the river St. Lawrence, where ice-breakers are employed, give a

very striking example of a wide variation of opening dates.

The average opening date for the last twenty years was April 18. The earliest opening during that period was March 29 and the latest May 1, a difference of thirty-two days. This difference between extremes occurred on the St.

Lawrence and can also occur at Hudson strait.

The ice conditions encountered by the *Montcalm* in the early summer of 1928 indicate that it would be inadvisable for a commercial ship to attempt the passage of the strait before the main pack has passed out and the ice has become fairly widely scattered. However, with Direction Finding Stations at different points, accurate information can be given out and vessels directed when it is safe to proceed.

Captain G. E. Mack, who for a number of years was master of vessels for the Hudson's Bay Company, and who is now with the Department of Railways and Canals, states that in his opinion there is an open channel, free of ice, between Digges island and the mainland for a considerable period after the ice

has appeared between Nottingham island and Digges island.

Captain Mack has had a great deal of experience in these waters and any

expression of opinion from him should be given serious consideration.

The observation reports of the expedition do not make any record of this

open channel but the matter is well worth further investigation.

The possibility of an open channel between Digges island and the mainland at a later date than between Digges island and Nottingham island is of great importance and an additional reason for sending an ice-breaker to the west end of the Strait for the purpose of observing the closing conditions.

In the event of it being shown that this channel exists considerable survey work would have to be done and a chart issued covering the section from Digges

island to the south end of Mansell island.

### Fog Conditions

Condensed Records, 1927.

July 28 to 31—Between Port Burwell and Nottingham—fog observed every day—one day eight hours duration.

August 2 to 13—Fog observed on nine days at Nottingham Island—once for ten hours, twice for six hours.

August 20 to September 11—Between Ashe Inlet, Lake Harbour and Wakeham Bay—fog on nine days, twice for six hours and once for four hours.

September 12 to 25—Fog on eight days at Port Burwell—once for six hours. October 12 to 14—Fog two days—Wakeham Bay.

November 7—two hours fog at Port Burwell.

Fog was recorded on thirty-three (33) out of one hundred and seven (107)

days between July 28 and November 11.

The above record does not mean that vessels had to cease running, as the fog varied greatly in density, sometimes the *Stanley* was forced to proceed "dead slow" at other "Half speed," and it was only on two or three occasions that she had to be brought to a complete stop.

# Condensed Records, 1928.

Fog was recorded on the following dates: July 4, 7, 18, 19, 23, 24, 25, 27, 29, 30, 31; August 1, 2, 4, 6, 7, 8, 9, 10, 13, 14, 16, 17, 18, 22, 29; September 1,

3, 4, 5, 6, 7, 15, 16, 17, 18, 22, 23, 24, 27, 29; October 3, 4, 5, 6, 10 and 12.

During the period of 128 days, from July 3 to November 8, that the *Montcalm* was in the strait, light fog was encountered on 39 days, dense fog on 14 days, and the total number of days on which fog of any description was noted was 47. The duration of the fog on the above dates varied from 1 hour to 1 day, but only on one occasion did it last the full 24 hours.

Observations taken only for two seasons are not enough from which to make a reliable average, but they give an indication that conditions in Hudson strait, if they are not better, compare at least very favourably with conditions in the

Strait of Belle Isle or on the Nova Scotia coast.

Vessels proceeding on a course through the strait, say for Churchill, or outward bound, assisted by Direction Finding Stations should be subjected to very little delay on account of fog.

### ICEBERGS

During the season of 1927 and 1928 a good many ice bergs were encountered, more in 1928 than in 1927. Some of these bergs were seen as far west as Charles island, which was assumed to be about the limit of their westward drift. However, the observation report from Nottingham Island, November 19, 1928, states that large bergs were visible 15 miles to the southwest. This goes to show that perhaps under certain wind and tidal conditions that they may be carried much further west than the observations made from the Stanley and Montcalm would indicate.

These bergs do not originate in Hudson strait, Fox channel, or Fox basin, but come from the north by way of Davis strait, entering Hudson strait at Hatton headland, Resolution island, and by Gabriel strait, which lies between Resolution island and Baffin Land. They are carried to the westward by the current which flows along the north side of the strait until eventually they come into the influence of the easterly current on the south side and are brought back

down the strait and out into the Atlantic ocean again.

These bergs are naturally a menace to shipping and in thick weather here as elsewhere, vessels must be navigated with caution.

### CHARTING AND TIDAL INFORMATION

During the season of 1927 the impression was formed that the charts were inaccurate, but at the time a verification was impossible.

Last season it was conclusively proven that the existing charts are at least in places very inaccurate and unreliable.

Mr. R. G. Madill, Assistant Magnetician of the Dominion Observatory, Department of the Interior, and his Assistant, Mr. Charles Rump, were at the request of his department, attached to the expedition and went north on the *Montcalm*.

The magnetic and astronomical work performed by Mr. Madill is of great value as it gives a very recent check on the variations of the compass as well as a very definite check on the charting.

TABLE SHOWING DIFFERENCES BETWEEN CHART AND OBSERVATIONS TAKEN BY MR. MADILL

Location	Position	on Chart	Position by	y Mr. Madill	Remarks	
	Latitude	Longitude	Latitude	Longitude	Itemates	
Port Burwell			60° 24·7′	64° 52′	Agrees with previous observations.	
Resolution Island (Acadia Cove).			6 <b>€</b> 18·5′	64° 53·4′	Agrees with previous observations.	
Cape Hopes Advance (D.F. Station).	61° 03′	69° 33′	61° 05·2′	69° 33·4′	Correct position 2.2 nautical miles north of chart position and plots in strait.	
Hearn island, Diana Bay East Headland entrance			61° 04·8′	69° 40·8′	Not shown on chart.	
to Wakeham Bay	61° 47′	71° 48′	61° 41 ·8′	71° 54·8′	Correct position 6 nautical miles SW. of chart position.	
Base "C," Wakeham	61° 36′		61° 35·7′		Nearly the same for latitude.	
Nottingham island (D.F. Station).	63° 07′	77° 50′	63° 06·8′	77° 56·3′	Correct position 4 nautical miles west of chart position and plots in sea.	

From the above it will be seen that the charts are inaccurate at certain points. Several islands are known to be misplaced, one is shown off Cape Hopes Advance which does not exist, and another not charted, which lies about two and one-half miles to the westward of this cape. These errors at widely separated points indicate a general inaccurancy of the chart.

There does not appear to be any very definite or exact information available in regard to the tides and currents of Hudson strait. It is known in a general way that the tide rises to a considerable height in some parts and not so high in others, that the current is very strong in some sections, that the general set of the current is to the westward along the north shore of the strait and in the opposite direction on the south side. This rather indefinite information constitutes the extent of our knowledge.

### RECOMMENDATIONS

For two hundred years the Hudson's Bay Company has transported its cargoes to and from Europe by the Hudson Bay route. For probably one hundred and fifty years of this period these cargoes were successfully carried in sailing ships, consequently it does not seem unreasonable to suppose that modern ships, modern equipment and modern ideas should meet with a considerably greater degree of success, and that a very great and important route will eventually be developed, provided always that in the initial stages of the development every precaution is taken to provide for the protection of the vessels using it.

### CHARTING AND TIDAL SURVEY

There appears to be ample width and depth throughout the strait to take care of through traffic, as it is only when closely approaching the shores that a vessel gets into a dangerous position, but in order to secure the necessary factor of safety at the ouset, it is again suggested that permanent points and headlands should be accurately fixed by astronomical observation. This will allow of the chart being corrected, and will form a skeleton on which to build up more detailed work in the future.

As a knowledge of the tides and currents is of the utmost importance to mariners it is also again suggested that an endeavour be made immediately to obtain this data and that a commencement be made at the west end as there appears less information there than elsewhere in the strait.

### AIDS TO NAVIGATION

The first of these aids to be established should be Direction Finding Stations. A recommendation in regard to these stations was made in the preliminary report and during the season of 1928 a station was built, calibrated and put in operation at Cape Hopes Advance, and the Nottingham Island wireless station was converted into a Direction Finding Station but has not yet been calibrated.

It is suggested that additional stations be erected at the following points; Resolution island, Charles island, and one either on Coats island or Mansell

island as may be found best.

A vessel about to enter the straits would be picked up by Resolution and Hopes Advance, and her position fixed by intersecting bearings throughout the narrowest part of the Strait, from 50 miles east of Resolution to 50 miles west. Here the intersecting bearings, become too acute to be accurate and the vessel would proceed west on a single bearing from Resolution until she arrived in the vicinity of Hopes Advance. From this point to Big island her position could be again fixed by cross bearings from the above mentioned stations. From Big island westward the ship would be able to run on single bearings alternating with double bearings that give a 'fix' until she arrived in Hudson Bay and had squared away for Churchill on a single bearing from that station.

As a further aid to navigation it would be a very simple matter to have a

light at each Direction Finding Station.

### ICE-BREAKERS

As ice-breakers are required for the St. Lawrence, it is reasonably certain that they will also be required for the Hudson Bay route. The ice-breakers in the St. Lawrence have now become indispensible as they assist in the spring in opening the upper reaches of the river, speed up the traffic through the ice-fields in the gulf and in the late autumn escort and assist vessels proceeding to sea through the ice. The knowledge that an ice-breaker is available if necessary gives confidence to Masters, owners and shipping interests generally.

To take care of the traffic that it is expected will be attracted to the Hudson Bay route at least two modern ice-breakers will be required, one based on Port Churchill and the other possibly on some suitable harbour in Hudson strait.

In the preliminary report last year it was pointed out that these vessels

would be required, and one of them is now under construction.

In order to assure an auspicious opening of the route and to gain the confidence of the shipping interests from its commencement, it is advisable that the second ice-breaker should be contracted for at once in order to be ready in ample time for the opening.

### FUEL BASES

The question of fuel for these vessels will have to be taken care of. For the ship based on Port Churchill the fuel could be brought in by rail or water, but for the other if based on a harbour in the strait a vessel would have to be stationed there. As the ice-breakers are to be oil-burners an oil tanker would be preferable to an oil base on shore, for the reason that it could be moved about from place to place, which at times may be necessary.

There are two harbours in the strait that would be suitable for a fuel base; Wakeham Bay and Sugluk Inlet. Wakeham Bay is situated about half way up the strait on the south side. There are several reefs off the entrance but a pair

of beacons properly placed would take a ship safely past them. The anchorage is at the upper end of the bay, is completely landlocked and surrounded by high hills. At this point there is rather more water than necessary, the depth being 35 fathoms, but it is so sheltered that a vessel would lie there throughout the season without shifting position.

Sugluk Inlet is also on the south side of the Strait and about 110 miles west of Wakeham Bay. The approach to Sugluk is safe and easier than is the case at Wakeham, and there is less water at the anchorage than at Wakeham but it

is more open and exposed to the winds.

It is certain that a fuel base must be established at Churchill to supply commercial vessels as well as ice-breakers, but it is possible that it might not be necessary to have another in the Strait.

The ice-breaker now being constructed for the Hudson Bay Route will not be in commission before 1930. By this time probably the railway will have been

completed to Churchill, and fuel will be available at that port.

In the event of this vessel being sent on patrol duty in the vicinity of Nottingham and Digges islands as already suggested, it could proceed right through to Churchill, refill tanks and return to its station, to carry out the duty for which it had been detailed, and in this way could demonstrate the suitability, or otherwise, of Churchill as a fuel base for an ice-breaker operating at the rest end of the strait.

### ADDITIONAL ICE OBSERVATIONS

As the ice records obtained by the expedition only cover a period of two seasons, it is recommended that an ice-breaker again be sent to obtain further information in regard to the opening in the spring and the closing in the autumn, and that a special effort be made to determine the period during which it may be safe for vessels to navigate at the west end after the first ice has been reported, and also to ascertain whether the channel between Digges island and the main land is more free of ice at that time of year than the channel between Digges and Nottingham islands.

### GENERAL

The measure of success obtained from any water transportation route depends largely upon the safeguards provided for the vessels making use of it. With efficient safe-guarding the confidence of the shipping interests and underwriters is obtained, and traffic increasingly attracted.

Therefore, it is essential that the Hudson Bay route should be provided with all the necessary safeguards, accurate charts, reliable tidal information, modern aids to navigation, and powerful icebreakers, in order that the success and good

name of this waterway may be assured from the outset.

# Appendices Attached to Report, Dated January, 1929 of Officer in Charge, Hudson Strait Expedition of 1927-28

- No. 1. Copy of the Log of the Expedition. C. G. S. Stanley 1927 and C.G.S. Montcalm 1928.
- No. 2. Plan showing location of Bases.
- No. 3. Plan showing Routine Flights Base "A," copy of orders covering same attached.
- No. 4. Plan showing Routine Flights Base "C," copy of orders covering same attached.
- No. 5. Plan-showing Routine Flights Base "B," copy of orders covering same attached.
- No. 6. Plan showing Special Flights, copy of orders covering same attached.
- No. 7. Copy of Meteorological observations made on C.G.S. Stanley, from July 17, to November 25, 1927.
- No. 8. Copy of Meteorological observations made on C.G.S. Montcalm from June 24 to November 14, 1928.
- No. 9. Ice observations at Bases "A"—"B"—"C", 1927-28.
- No. 10. Copy of meteorological observations made at Bases "A"—"B"—"C", 1927-28.
- No. 11. Copy of Water Temperatures as taken from C.G.S. *Montcalm*, from June 24 to November 14, 1928.
- No. 12. Photographs.

### APPENDIX 1

# LOG OF THE HUDSON STRAIT EXPEDITION, 1927

C.G.S. "STANLEY"

Sunday—July 17, 1927.

In the morning the C.G.S. Stanley and the ss. Larch anchored in the stream ready to proceed. Delay occasioned by two cooks for bases backing out and having to find others at the last minute. The contractor's crew for the erection of the buildings went aboard before noon and the personnel for the bases about 2 p.m. At 3 p.m. the Stanley weighed anchor and proceeded out slowly followed by the Larch. At 4.20 p.m. had Thrum Cap buoy abeam and vessels squared away on course along the Nova Scotia coast. Ran into fog about 4.30 p.m. which continued until midnight. Vessels proceeding steadily at about 7 knots.

Monday-July 18, 1927.

Proceeding through dense fog all day. At 4.30 a.m. a very regrettable accident occurred which cast a gloom over the whole ship's company. Oiler Emile Roy of Quebec by some mischance fell into the crank pit and was instantly killed. The accident was seen by no one as Second Engineer Batt at the time was in the fire-room door, and it was only on his return to the after part of the engine room that he discovered what had occurred. Arrangements were made with Mr. V. Mullins, agent of the Department of Marine at Sydney to have an inquest on the arrival of the ship. Position of the ship at noon Lat. 45 deg. 21 min. North, Long. 60 deg. 35 min. East. Fog cleared at 12 midnight as Stanley going into North Sydney. The ss. Larch was directed to proceed to St. Paul's island and await further orders.

Tuesday—July 19, 1927.

Arrived in Sydney Harbour 1.45 a.m. and anchored. At 8.30 a.m. the coroner and jury came on board and held inquest, afterwards taking the body (Oiler Emile Roy) ashore for shipment to Quebec. An oiler (John Wiseman) was taken aboard to replace Roy, and at 9.20 a.m. the *Stanley* left North Sydney proceeding towards St. Paul's island. Position at noon Lat. 46 deg. 39 min. North, Long. 60 deg. 08 min. West. Continued through dense fog all day.

Wednesday—July 20, 1927.

Dense fog all day. Steering gear broke down three times during day, which occasioned some loss of time. Could find nothing wrong with steering engine or shafting. Found a lashing that was more or less jamming rod where it joins chain. Cleared this and proceeded. Were much worried as this situation might be quite serious if the ship became unmanageable in a storm on a lee shore. Reported the situation to Ottawa at night and stated that if trouble continued it might be necessary to take the *Montcalm*. Position at noon Lat. 49 deg. 41 min. North, and Long. 58 deg. 28 m. West.

Thursday—July 21, 1927.

At 12 midnight started slow ahead steering gear again in working order. At 5.30 a.m. telegraph set at full speed. Arrived at Point Amour and anchored at 11.30 a.m. Steering gear gave out again. Chief Engineer found trouble in

the gearing and corrected it. The Larch arrived and anchored near us about 5.30 p.m. Most of the personnel of the expedition went ashore for a couple of hours and visited the Lighthouse and Radio Station. Our doctors on request from Mr. Davis, the owner of the fishing station, examined one of his nephews, whom they found to be getting over an attack of appendicitis. Captain Hearn went away in a dory and came back in an hour with a nice catch of cod. At 6 p.m. as steering gear in order again we proceeded on our way followed by the Larch. Weather clear all day. At midnight we were off S.W. Belle Isle light. Position at noon, Point Amour.

# Friday—July 22, 1927.

Continued steadily on course all day. At 3.57 a.m. N.E. Belle Isle light was abeam. At noon the position was Lat. 53 deg. 05 min. North, Long. 55 deg. 31 min. West. Our speed which is governed by the speed of the *Larch* is about 7 knots per hour. Weather being fine all day. Passed numerous icebergs, some beautifully castillated. We also saw a number of whales and two small whalers. Messages were intercepted from the *Bay Rupert* of the Hudson's Bay Company which stated she was ashore on the "Clinker" off Cape Harrigan, that she was a total loss and that the crew had been safely landed on the Farmyard Islands. Tried to get a message through to them in the late afternoon but could not raise them.

# Saturday—July 23, 1927.

Steaming steadily along all day. Weather cloudy with moderate southwest wind. In the afternoon and evening heavy rain. About 9 p.m. ran into dense fog and had to slow to about 2 knots as there was a good deal of ice about. Passed numerous large bergs throughout the day. Sent a message to the Bay Rupert asking if we could do anything for them, but they did not require any assistance, the mail boat Kyle was expected to reach them to-day or to-morrow. Position at noon Lat. 55 deg. 24 min North, Long. 58 deg. 30 min. West.

# Sunday, July 24, 1927

At midnight still dense fog proceeding at rate of about 2 knots as numerous bergs about. Larch stopped during night and did not catch up until noon, when we went ahead again at 7 knots. Noon position Lat. 57 deg. 02 min. North, Long. 60 deg. 30 min. West. Weather clear and fine for balance of the day. Moderate southwest wind. Were off Cape Mugford about 9 p.m. In the morning at 10 a.m. a short Church of England service was held with Major McLean presiding.

# Monday, July 25, 1927

Ran on through night until 8.30 a.m. when we had to slow on account of dense fog and as bergs plentiful it was unsafe to proceed faster. Ran on until 4 p.m. at dead slow then stopped for remainder of day as were getting too far away from *Larch*, which stopped earlier in the afternoon. Position at noon approx. Lat. 59 deg. 27 min. North, Long. 62 deg. 31 min. West. Had message from Captain Mack of the *Nascopie* giving his position and ice conditions in straits as far west as Big Island.

# Tuesday, July 26, 1927

Stopped until 3.35 a.m. when fog cleared and we went ahead dead slow, and continued at this rate until 3 p.m. passing numerous pans of ice. At 3 p.m. fog cleared. Met heavy open ice abeam of the Four Peaks through which we zig-zagged until about 8 p.m. when we stopped again abeam Cape Chidley

to wait for the *Larch*, which was considerably to the eastward of us. About 10 p.m. turned on our searchlight which gave this vessel a good mark to steer by. At midnight we were still stopped waiting. Position at noon by dead reckoning Lat. 59 deg. 44 min. North, Long. 62 deg. 28 min. West.

# Wednesday, July 27, 1927

At 3.45 a.m. the *Larch* was close up and we got under way at half speed proceeding through heavy open ice. We came around between the Button Islands and Resolution Island working through heavy open ice all day and arrived at Port Burwell about 5 p.m. the *Larch* arriving two hours later. This ice that we passed through to-day was of a nature to make it necessary to navigate the *Larch* or any commercial vessel with extreme caution, following a zig-zag course and taking the greatest care, the idea being not to strike the ice but merely to push through, driving through even at a slow speed not to be considered.

Captain Balcom of the *Larch* stated that he was at least twenty-five miles off shore in the vicinity of Cape Chidley and that the heavy open ice extended as far as he could see to the eastward, consequently this ice extended for at

least thirty-five miles off shore.

At Port Burwell the Moth plane was put over the side and Major Lawrence and Flight Lieut. Leitch made a flight looking for a site for a base, and reported a likely looking place to the south.

Mr. Coghill, Dr. Kelly, Flight Sgt. Terry and Corp. Torrie were put ashore with a launch, dory and supplies. They will remain at Port Burwell until we return and will endeavour to find a suitable location for Base "A".

Mr. Ford, manager of the Hudson's Bay Company, came aboard and was exceedingly helpful, giving us a great deal of valuable information in regard to conditions. He also put the Old Mission house at our disposal and Mr. Coghill and party will make this their headquarters until our return. This is quite a large well constructed building with accommodation for fifty to sixty men and is situated in a narrow inlet where there is fine shelter for the launch in any sort of weather.

Corporal Nichols and Constable Montague of the Royal Canadian Mounted Police came on board with Mr. Ford and they also did everything possible to help us. Constable Montague will likely be attached to Base "A" when it is established.

Mr. Ford and the Mounties as well as some Eskimos were entertained to an impromptu supper and gramaphone concert. We were also able to let them have two drums of gasoline and some rations of which they were rather short owing to the non-arrival of their stores which were on the ill-fated

Bay Rupert, wrecked last Friday.

We had our first sight of the Eskimo, men, women, and children, dogs and kyaks, and they were of great interest to all hands. They on their part did not exhibit the same degree of curiosity on seeing for the first time an airplane circling overhead, though it was quite evident from the expressions on their faces that they were intensely interested. (Temperature of water at 10 a.m., 35 deg. Fah.)

# Thursday, July 28, 1927

Left Port Burwell at 6 a.m.; proceeded towards Big Island, N. 53 W. true. Clear water until about 12 miles from Burwell. At 8 a.m. ran into heavy open ice and proceeded through this until about noon. From noon until 11.30 p.m. ice getting gradually more scattered. At 11.30 p.m. both ships stopped as heavy ice could be seen ahead and on both sides.

Coming through the heavy open ice such as we met to-day it is necessary to navigate with caution. About five o'clock we sighted our first polar bear on an ice pan. I hit him twice after he had taken to the water and was following him for final coup when he was shot from the *Larch*. The carcass was brought aboard and skinned.

Position at noon Lat. 60 deg. 47 min. North, Long. 66 deg. 0 min. West.

Friday, July 29, 1927.

Started at 2.35 a.m. when it was light enough and proceeded on course to Big Island, through heavy open ice in some places close packed with some large pans. Steamed through ice of this nature until 8.40 a.m. when fog came down thick but we continued running dead slow. At 9.25 a.m. fog lifted and we got practically into clear water. There was considerable ice on our port side, and we passed a number of good sized bergs. At Ashe Inlet beacon we changed course N. 78 West to pass off Charles Island. At 3.45 p.m. ran into more fog and at 4.30 p.m. again met heavy open ice, through which we steamed slowly for about 5 miles. When we cleared this belt of ice we continued on course until 9.30 p.m. in practically clear water. At 9.30 p.m. more ice was encountered and we stopped for the night as it was not considered wise to work through it in the dark. We were at this point 52 miles from Ashe Inlet beacon. Position at noon Lat. 62 deg. 07 min. North, Long. 70 deg. 0 min. West.

Saturday, July 30, 1927.

Got under way 2.30 a.m. and proceeded through heavy strings of ice and heavy open ice until 4.10 a.m. when we were forced to stop on account of dense fog. Started again when fog cleared at 9.15 a.m., proceeded steadily for the remainder of the day, passing through strings of heavy ice and scattered ice. Position at noon Lat. 62 deg. 45 min. North, Long. 73 deg. 05 min. West. At 6.50 p.m. west end of Charles Island abeam five and one-half miles off.

Sunday, July 31, 1927.

At 12.30 a.m. stopped on edge of heavy open ice. Proceeded again at 2.10 a.m.; not much ice and scattered. At 8 a.m. fog banks, going slow, meeting strings of heavy ice. Fog too thick to make the land, sounding at 11 a.m. 48 fathoms, shaped course for Digges Island and proceeded slow. Position at noon by dead reckoning Lat. 63 deg. 07 min. North, Long. 77 deg. 30 min. West. Strong west-southwest wind, ship pitching and rolling, sighted Digges Island 6.40 p.m. and proceeded along coast under the lee of the land until we were abeam of what we took to be Erik Cove. Lay there for the night to go in by daylight. The Larch arrived about an hour later. Had Divine service in the mess room at 10 a.m.

Monday, August 1, 1927.

At 3.35 a.m. proceeded toward Erik Cove, arriving there 5.50 a.m. and anchoring about three-quarters of a mile from the head of the cove. Went ashore with Mr. Lawrence and Mr. Leitch. Examined the ground for a flying base and found there was an area comparatively level that might do, but that the width between the heads on each side was barely great enough, but it is the best situation we have as yet seen. We interviewed Mr. Milton of the Hudson's Bay Company and he stated that heavy wind squalls up and down the valley are prevalent. Concluded that before deciding on Erik Cove that it would be advisable first to have a look at Nottingham Island. Took some fresh water in boats and about 45 tons of coal from the Larch. Major Lawrence and Mr. Leitch went up in the "Moth" but did not see anything that appeared even a possibility in the way of a base. Mr. and Mrs. Milton came on board for tea and stayed the evening with us.

# Tuesday, August 2, 1927.

Left Erik Cove at 3 a.m.; came across to Nottingham Island, arriving 8.30 a.m. and anchored at entrance to Port de Boucherville. Went about three miles up the inlet in the launch, sounding as we went, until the water shoaled to 3 feet at high tide. Made an examination of the only possible site for an air base, a fresh water lake which we discovered, but found it too small; other conditions also were unsuitable, the inlet being entirely too narrow and unsafe for a ship like the *Larch* to enter. The Admiralty chart is quite inaccurate. The weather was very wet and dirty. After returning to the ship it was decided to attempt a reconnaissance with the "Moth" in the morning, provided the weather conditions improved. Remained at anchor at the entrance to the inlet for the night.

# Wednesday, August 3, 1927.

In the morning Mr. Lawrence and Mr. Leitch made a flight with the "Moth" and located a likely looking place for a base. Left Port de Boucherville about 10 a.m.; came around to the most southwesterly point of Nottingham Island, abreast of a beacon and anchored. Went ashore in launch and found a satisfactory location for "B" Base. Did a lot of sounding outside and found we can anchor within less than a mile, but the position is exposed and we may be delayed taking our outfit ashore. The situation here would be so much safer from the point of view of flying that it was decided to attempt to establish Base "B" at this point on Nottingham Island, though it was thoroughly understood that it might be a big operation. Sent a radio message to Captain Balcom of the Larch telling him to come over from Erik Cove and join us.

# Thursday, August 4, 1927.

Easterly wind, fine. Larch arrived 9 a.m. and anchored. Put surf boats, launches and scow out. Delayed an hour after dinner to allow ships to shift position to get clear of ice. Began unloading 2 p.m. and continued on until 10 p.m., with an hour for supper. Discharging went in a very satisfactory manner for a commencement.

# Friday, August 5, 1927.

Began work at 7 a.m. and continued until 6 p.m. with an hour for dinner. The personnel of the expedition also unloaded the surf boats after supper. The discharging was most satisfactory and a large amount of material was transferred in spite of the fact that one launch was undergoing repairs all afternoon. Our small scow is proving most useful and carries heavy loads in calm weather.

Some heavy open ice in the vicinity to-day and yesterday.

# Saturday, August 6, 1927.

Working all day unloading, mainly sending lumber ashore for buildings. The personnel of the Expedition worked after supper until 9 p.m. The slip way is practically finished, one derrick set up and most of the lumber sorted. The repairs to the launch which was broken down were completed by noon and the boat given a satisfactory try-out.

All hands working very hard; weather fine; some heavy open ice about.

# Sunday, August 7, 1927.

Easterly wind, weather fine in the morning with light rain in late afternoon. Carrying out unloading operations until 3 p.m. Material being discharged mostly lumber for buildings. As our goods were going ashore more quickly than they could be handled, knocked off unloading and went in with the hatch crews. All

hands cleaned up the congestion on the beach. One derrick was put into operation in the late afternoon and the slipway was finished complete with trolley. The foundations of the storehouse were commenced to-day and the lumber transported to the site of this building.

The day being Sunday it will be necessary to pay overtime to the construction crew, winch men of the Larch and certain members of the crew of the

Stanley.

Service was held in the mess room at 8 p.m.

No ice in sight to-day.

# Monday, August 8, 1927.

Dense fog most of the morning, so much so that the launches had to run

by compass. In the afternoon very fine.

All day unloading. Finished sending the lumber ashore. Also sent considerable hard coal and another tractor to help handle material. The storehouse is partly up and a commencement made on the men's dwelling. Went ashore in the evening and carried on for about two and a half hours.

# Tuesday, August 9, 1927.

Weather dull with a great deal of fog all day. Unloading going on steadily all day, mainly hard coal and provisions being handled. Work progressing well on the storehouse and the men's dwelling. The Stanley's launch broke down in the afternoon, the trouble again being with the clutch. In the evening the personnel of the expedition went ashore, unloaded two boats and put the perishable stores under cover. One gang of the construction crew worked on the storehouse at night.

We established communication with Port Nelson by radio which should

greatly facilitate the transmission of messages to Ottawa.

Received a message from Hon. Charles Dunning, Minister of Railways and Canals, wishing us success. He also stated that Port Churchill had been definitely selected as the Hudson Bay port and intimated that the work would be proceeded with at once. A reply was sent thanking him on behalf of the outfit for his kind wishes and giving a short statement as to the progress of the work.

# Wednesday, August, 10, 1927.

Weather overcast and foggy. Westerly wind. Unloading general cargo all day. Work ashore progressing very well. Four buildings now under construction, the blubber house having been started to-day. The construction crew also put up a temporary building to live in. The personnel of the expedition carried on with unloading again in the evening. A party of Eskimos arrived in a sloop and paid us a visit. Sent a message to the Department making general report of progress to date.

# Thursday, August 11, 1927.

Weather very fine all day. Light northeast wind. In the morning we were delayed until after nine as our only motor boat was giving us trouble. The Stanley's launch is now definitely out of commission as the clutch is completely gone. Have asked department for new clutch and spare parts to be sent on second trip of Nascopie. Unloading cargo all day. Work on buildings going well but some delay to-day as the construction crew and part of the base personnel were transferred and they had to do a certain amount of organizing on their own account. The personnel of the expedition and part of the construction crew worked again at night.

Friday-August 12, 1927.

Weather very fine, easterly wind.

Unloaded large quantity of stores and material but some delay caused by spring tide going very low and in the late afternoon boats went aground too far from the landing. During the time it was impossible to discharge the boats, sorting and distributing materials was carried out. Supper was taken early and the outfit was back ashore at six o'clock in order to make the most of the rising tide to get the goods left over from the afternoon on to the beach.

Buildings are going ahead steadily, a number of anchorages are finished for

the radio masts and one of the plane to ground radio masts was erected.

There has been no ice in sight for several days.

Saturday—August 13, 1927.

Strong easterly wind—some fog in the morning. No ice in sight.

Discharging all day. Delayed somewhat in the middle of the day owing to strong easterly blow which made it necessary to run for shelter with the scow. The personnel worked again in the evening unloading boats and the scow was loaded with 30 barrels of coal oil to be ready for discharging in the morning. Buildings are progressing well, the two plane to ground radio masts are set up and the first section of one of the radio masts erected.

Sunday-August 14, 1927.

Weather very fine and bright, light easterly wind. No ice in sight.

At 7 a.m. lifted anchor, went alongside *Larch* and took coal all day, using bags which were dumped into bunkers. Discharging going on all day. Two of construction gangs working ashore. Butler's gang would not work. All the personnel of "B" base now living on shore. Coaling continued until 10.45 p.m. and by that time 120 tons of coals were on board. Unloading boats in the evening on shore until 10.15 p.m.

Monday—August 15, 1927.

Weather fine, bright and clear. No ice in sight.

Taking coal alongside Larch all day. When they knocked off at 10.45 p.m. had taken 190 tons for two days. Sent two fusilage cases ashore and up the hill, as well as several boatloads of general cargo. Buildings progressing well. The men's dwelling covered in to-day and two sections of one large marconi mast erected. Unloaded several boats at night. Wrote report on progress to Mr. Johnston, Deputy Minister of Marine and Fisheries, to go forward to-morrow morning by Nascopie, of the Hudson's Bay Company.

Tuesday—August 16, 1927.

Weather very fine and bright, light north wind. No ice in sight.

Continued taking coal all day. At 10 p.m. when men stopped had 263 tons for three days. In the morning two wings for the planes were taken ashore and safely landed—a trip for each wing. This operation took up the whole morning and was carried out in a most satisfactory and efficient manner by Major Lawrence, his officers and men.

Four boatloads and one scowload of general cargo was sent ashore in the afternoon, the boats only being discharged at night as the tide was low in the afternoon. One tractor was loaded on the scow to be ready to be taken back

to the ship in the morning.

The *Nascopie* stopped outside about 4 a.m. and the mail from the ships was sent off to her. Very little cargo remains on board the *Larch* for Base "B". Finished coaling at 10 p.m. Pulled away from the *Larch* and anchored.

Buildings progressing well. One large radio mast completed and the erec-

tion of the other will be started in the morning.

Wednesday-August 17, 1927.

Light southwest wind, fine. No ice in sight and no ice reported by officers who made two flights with the "Moth" in the evening. The last of the cargo for "B" base was sent ashore in the evening, and this included the large empty wing case. Fair progress being made with the buildings. The second radio mast on top of the hill was erected to-day. Plane to ground radio is being tested out and they were able to phone the *Stanley*; unloading, sorting and assembling goods and material going on ashore.

Thursday—August 18, 1927.

Weather fine, light easterly wind. No ice in sight.

Unloaded large wing case and several boats. Returned a variety of equipment to the *Larch* that we had been using ashore, and straightened out a lot of small details. Buildings going ahead well. The aerial for large Marconi set went up in morning. Riggers finished at this base. Ready to leave in the late afternoon.

The personnel of the expedition at Base "B" is as follows:—

Flight Lieut. Leitch, R.C.A.F.
Flying Officer Ashton, R.C.A.F.
Dr. Wickwire, M.O.
Radio Engineer Hudon.
Radio Operator Bunt.
Corporal McInnis, R.C.M.P.
Ed. Lefebre, Storekeeper.
Flight Sgt. Ramsden, R.C.A.F.
Sgt. W. Keighley, R.C.A.F.
Corp. D. B. Chambers, R.C.A.F.
Corp. F. J. Ewart, R.C.A.F.
Sgt. Major Pearson, R.C.C.S.
Mr. Millette, Cook.

Harry Cahoon, second cook, the last to come out with the construc-

The construction crew remaining at this base to finish buildings consists

of five carpenters and five handymen.

As the clutch of the *Stanley's* launch had given out and the boat could only be used going ahead, it was necessary to take the Base "B" launch in place of it as it is essential to have a boat that will manœuvre well for unloading. Leaving the damaged launch at Nottingham was not satisfactory but the only thing we could do.

Left Nottingham Island at 6.30 p.m. preceded by about an hour by the Larch

and shaped our course for Big Island.

Friday—August 19, 1927.

Going ahead steadily throughout the night and all day. Visability only about 8 miles on each side but no ice seen between Nottingham Island and Ashe Inlet. Arrived off Ashe Inlet 5 p.m. anchored inside 6.15 p.m. Few bergs off inlet. Will make an examination for a site for Base "C" in the morning.

Saturday—August 20, 1927.

Too much fog all day to make flight with the "Moth". Major Lawrence, Carr-Harris and myself went ashore with the launch and made an examination on foot of the upper end of the inlet. We found a small stream, a fall of about 15 ft. and a fairly large lake about a mile back but no suitable place for a base. Very desolate place. Very much less life here than at Nottingham Id.

In the afternoon, the photographer, Mr. George Valiquette, went ashore and took some general pictures. Fishing at the foot of the fall was tried but with no results. A net set out by Captain Hearn contained nothing when lifted in the morning.

We remained at anchor as the weather was so dirty all day that it was not

wise to attempt to go to Lake Harbour.

Wireless reception in this inlet reported by the operators to be rather unsatisfactory.

Sunday-August 21, 1927.

In the early morning weather too thick and foggy to think of going to Lake Harbour. Had message from Larch lying off High Bluff Island that weather calm and moderating. Left Ashe Inlet 11 a.m. proceeded toward Lake Harbour. Iceberg grounded fair in entrance to Ashe Inlet. Arrived close to Beacon Island about 10 miles outside Lake Harbour and anchored. Went to head of inlet in launch and made an examination. Major Lawrence also made a flight with the "Moth" and will have to make another as he did not locate anything.

Met Mr. McGibbon, manager of the Hudson Bay Company. The situation

right at the post is not of the best.

Both ships very nearly touched a reef, though anchored in 17 fathoms. Received two messages to-day from Nottingham Island, which we assume to be sent by Marconi set as they were on 600 metre wave length.

Brought two Eskimo pilots out with us, one for Stanley and one for Larch.

Monday-August 22, 1927.

Weather too foggy in early morning to start. Lifted anchor 10 a.m. and proceeded towards Lake Harbour, passing to westward of Beacon Island and by a very roundabout course about a mile into inlet where we anchored at 12 noon. The *Larch* followed shortly afterwards. Each ship was piloted by an Eskimo from the Post. Major Lawrence made a flight and covered a considerable area but found nothing suitable. Went up to the post in the launch and made a further examination but the situation is not good. Decided to make another flight in the evening which was done but with no better results.

Both ships remained at anchor in the inlet for the night. This anchorage is sheltered all round. We were visited by a number of Eskimo families. They were setting out on a hunt and were travelling in first class whale boats.

Tuesday, August 23, 1927

Made an examination of several coves and lastly of Lake Harbour Hudson Bay Post and found nothing suitable for a base. Our material and equipment could not have been put ashore at any of these places in any reasonable time, nor could planes be handed from beach to water and vice versa. Decided to cross the Strait and try Wakeham Bay. Left Lake Harbour at 2 o'clock, dropped Eskimo pilot at 2.55 p.m. abeam Beacon Island and proceeded towards Wakeham Bay. Course S. 80 E. mag. At 8.30 p.m. stopped to await daylight, 10 miles off Wales Island.

No ice was seen between Lake Harbour and the stopping point for the night with the exception of one berg in midstrait.

Wednesday, August 24, 1927

Got under way outside at 3 a.m. proceeded slowly, weather thick. At entrance to Wakeham Bay 7 a.m. anchored at Hudson's Bay Company's Post in bay, 8.05. Went ashore, looked over ground and found very satisfactory position near Hudson's Bay Company's Post for site for Base "C". The Moth made flight but could not locate anything nearly as good. There is a

fair beach which will have to be cleared of large stones and on the shore side a very decent flat grassy meadow. In the afternoon all hands employed in clearing up the beach. Put two tractors, derricks and some other necessary equipment ashore, also laid out positions for buildings, ready for a big day to-morrow.

Revillon Freres also have a post here. Met Mr. Watt and his wife of the Hudson's Bay Company, and Messrs. Grassett and Berthe of Revillon Freres. There are quite a number of Eskimos here at the present time and

they appear to be greatly interested in all our doings.

No ice here and for 10 miles off Wales Island, Wakeham Bay.

# Thursday, August 25, 1927

Weather cloudy with light showers in the afternoon. Wind variable.

Unloading all day, material being lumber mainly. Eleven boat loads and two scows sent ashore. Some more cleaning up of beach was done at low water. The tractors can now come right down the beach. Materials are unloaded direct from the boats or scow into store-boats which are hauled to the site of the building for which they are intended. The erection of one derrick is about completed and another commenced. Work on foundation on men's quarters was begun. Very satisfactory progress for the first day here.

# Friday, August 26, 1927

Sent seven boat loads of lumber ashore. In the afternoon loaded two more but could not discharge them as it was blowing too strong from the northwest right on the beach. Had to leave Moth on mooring as it was too rough to go near it in a dory. Work ashore going well. The framing of men's quarters and storehouse going up. Foundations for the blubber house about completed. Both derricks erected. Anchorage for Marconi masts started, more beach cleaned up. It is to be regretted that we had this blow but for all that the progress is very fair.

# Saturday, August 27, 1927

Very much delayed by wind again to-day. Were able to send only nine boats to the beach. Had to knock off altogether about 4 p.m. Work on buildings going ahead satisfactorily. Framing of men's dwelling nearly all up and storehouse being covered in. Anchorage and base excavation for one Marconi mast ready to be concreted. Yesterday afternoon when the wind freshened suddenly to half a gale we had the Moth on the mooring. It was too rough to approach it in a dory so it had to be left to ride it out. During the night the Moth capsized and is a wreck. Major Lawrence salvaged it to-day but it is practically a total loss.

# Sunday, August 28, 1927

Fine weather all day. Light variable winds.

Sent eleven boat loads ashore to-day and one scow of steel masts, etc. Had a look over the work in the morning and it is going ahead satisfactorily. The men's dwelling and the storehouse are being closed in and the framing of the blubber house is well advanced though only started this morning. Concrete anchorages for the radio masts were being put in. We expect the ss. Beothic some time to-night.

# Monday, August 29, 1927

The Beothic arrived about 6 a.m. bringing Constable Murray of the R.C.M.P. who will be attached to Base "C" also two families of Cape Dorset Eskimos supplied by Mr. Parsons of the Hudson's Bay Company. These

Eskimos will eventually go to Nottingham Island. Went aboard the *Beothic* and saw Mr. McKenzie, of the Interior Department, who had been good enough to bring Murray and our Eskimos across to us. Sent off mail by this ship which left for Port Burwell about 10 a.m. Unloading going ahead well. The power house framing is going up.

# Tuesday, August 30, 1927

Strong northeast wind all day. Were able to unload only four boats as it was too rough. Very discouraging. The work on shore progressing very well. The men's quarters and store were all covered in, the blubber house and power house going up rapidly, anchorages for one radio mast finished.

# Wednesday, August 31, 1927

Weather fine with light northwest wind.

Unloading went very well, 14 boats and two scows being sent to the beach, the last scow in the evening with a fusilage case on board—landed in the dark. The men's dwelling, storehouse, blubber house and power house advancing steadily. The asbestos roofing is being put on the former. Two more anchorages for Marconi masts were finished to-day.

# Thursday, September 1, 1927

Weather fine again to-day, easterly wind off shore.

Loaded nine boats and three scows, one scow had 40 drums of gasoline, one a fusilage case, and one aeroplane engine and spare parts. Buildings going very well, one Marconi mast up about 80 feet. Anchorages for other mast all completed except one.

# Friday, September 2, 1927.

Weather fine. Light easterly wind.

Sent 11 boat loads to the beach and the scow with large wing case and wings. This was very successfully landed by Major Lawrence and personnel of expedition. At Nottingham Island we took the wings out of the case but here we were able to land the case and wings together. Building operations still progressing favourably. Anchorages for Marconi masts finished and one mast practically completed 150 feet in height.

# Saturday, September 3, 1927.

Weather wet in early morning but cleared later.

Eleven boats and two scows unloaded to-day. Men's dwelling being sheathed inside, storehouse practically finished, blubber house and power house well advanced, foundations for engines being laid in latter. One Marconi mast completed. We found that a certain amount of cargo for Base "A" has to be shifted in order to get at the lumber. This is being done at every opportunity without interfering with unloading.

# Sunday, September 4, 1927.

Weather very dirty all day. Strong N.W. wind and rain.

Shore party could do nothing in the way of unloading. The first and only boat sent ashore was swamped on the beach and it was not possible to work. We unloaded a boat that was ready to be sent ashore and knocked off. The construction crew carried on sheathing the inside of the buildings. The first section of the second Marconi mast was erected.

Monday, September 5, 1927.

Weather dull. Light westerly wind.

Had a very successful day with the unloading as we sent 4 boats and 10 scows ashore. This is, I think, the record so far. The scow carried 296 barrels of gasolene, coal oil, brick and cement. Buildings making good progress. One hangar has been commenced and the second Marconi mast is up over 100 feet.

Tuesday, September 6, 1927.

Weather very fine in morning. Moderate northwest wind in the afternoon. Fourteen boats and four scows unloaded. We had to stop using the scow in the afternoon on account of wind. All the gasolene, coal oil, cement, brick, provisions and coal are now ashore. The partitions in the men's dwelling are nearly finished, the foundation in the power-house as well as the framing of one hangar is well advanced, the storehouse finished and the second Marconi mast completed with aerial.

Wednesday, September 7, 1927.

Weather fine, strong northwest wind. Only five boats and two scows sent ashore to-day. We were delayed a good deal by wind. Buildings going ahead in a satisfactory manner. The hardwood flooring of kitchen, storeroom and pantry in men's dwelling almost finished; the partitions of this building completed. Floor being laid in power-house and one hangar going up rapidly.

Thursday, September 8, 1927.

Weather very fine. Light northwest wind.

All hands turned out at 4 a.m. and put the spare wing case, slipway trolley, etc., ashore. At 8.45 a.m. went alongside the *Larch* and began coaling, which was carried on until 4 p.m., when we had taken 50 tons aboard. After four took tractor aboard and some material from shore and got scow ready to be hoisted in. Work on buildings going ahead well. The two cooks and the construction crew of ten men sleeping ashore at night. Only some odds and ends remain to be sent to the beach in the morning.

Friday, September 9, 1927.

Taking coal all day from 7 a.m. to 11 p.m. The personnel of the expedition working ashore getting organized and settled but having meals aboard. They went ashore finally at 8 p.m.

The personnel of Base "C" is at present:—

Sqdn. Leader Lawrence, R.C.A.F. F/O Carr-Harris, R.C.A.F. Mr. Walsh, Radio Engineer. Lieut. Wm. Laurie, R.C.C.S. W. J. K. Clothier, M.O.H. Flight Sgt. Black, R.C.A.F. Sgt. Caggie, R.C.A.F. Corp. Warner, R.C.A.F. Corp. Riggs, R.C.A.F. Mr. E. Axcell, Radio Operator. Mr. R. Lemieux, Storekeeper. Const. J. Murray, R.C.M.P. Mr. Dorey, Chief Cook. Mr. Dacey, Assistant Cook.

To be joined later by myself, Mr. O'Malley, Secretary, and Mr. Valiquette, Photographer.

The hangar is going up rapidly, the frames all erected as well as the truss and some of the sheathing in place. The foundations in the power-house being completed and work on the other buildings is going on steadily.

Saturday, September 10, 1927.

Taking coal all day until 4 p.m. when we finished, having taken in all 200 tons. Weather wet and stormy. Left the *Larch* at 4.10 p.m. and anchored as too thick to leave for Port Burwell. Work being carried forward on shore but only with a construction crew of ten men who will remain to finish the buildings. The remainder of the construction crew was employed on board the *Larch* shifting and loading cargo.

Sunday, September 11, 1927.

Got under way at Wakeham Bay at 4.45 a.m. and proceeded at full speed towards Port Burwell followed by the *Larch*. Steaming steadily ahead until 4 p.m. when fog shut down thick and we slowed to half speed—at the rate of about 6 knots. Saw no ice anywhere; good visibility up to 4 p.m.

Divine service was held in the mess room at 10.30 a.m.

Monday, September 12, 1927.

Arrived at Port Burwell at 6.30 a.m. Received our first mail from civilization since we left. It was brought north by the Nascopie. Mr. Coghill, who was left here on our way to Nottingham Island, to look over the situation, came aboard and reported that there were only two sites in the vicinity that need be considered. We examined them both and decided on the one near the old Moravian Mission House. The site is situated beside a narrow channel which will give good shelter for planes and will be satisfactory for taking off and landing winter or summer. We will rent the Old Mission House from the Hudson's Bay Company for living quarters, storehouse, etc. This decision was arrived at by reason of the fact that the season is well advanced and our time is short, that landing facilities are poor, which will cause delay, and also because our crew for handling cargo and erecting buildings is now greatly reduced as we have dropped a good many men at Bases "B" and "C." In the late afternoon we sent two boat loads ashore.

Tuesday, September 13, 1927.

Sent the scow ashore first thing loaded with materials for working, the tractor, etc. and during the day managed to unload eight boats. The current through the tickle was so strong that we had to send the scow back outside, a run of about six miles. We cannot unload boats at the Mission at dead low water. Commenced laying the slipway and will improve the beach at the Mission. Laid out positions for Marconi masts and anchors. Consider we got along fairly well under the circumstances and as we get organized should do better.

Wednesday, September 14, 1927.

Weather very bad, gale from northeast with rain and fog. Rain stopped at noon. Worked hard all day to get five boats loaded and sent ashore. Progress not satisfactory but the best that could be done under existing weather conditions.

Thursday, September 15, 1927.

Weather conditions improved. Moderate northeast wind.

Sent 7 boat loads and one large scow ashore. Four of the boat loads and the scow went over the bar to the hangar site. Foundations being prepared for

the hangar and power house, drilling started for anchorage bolts of masts, derrick at hangar being erected. The situation here is rather difficult. We can only work over the bar to the hangars for three hours and at the Mission we must stop two hours before high water. However, as soon as the slipway is finished we will be able to make better time unloading at the hangars and at the Mission when the second tractor arrives on the Canadian Raider we will with the improved beach be able to work at all stages of the tide. The Canadian Raider was reported to-day about 165 miles south of Cape Chidley.

#### Friday, September 16, 1927.

Weather reasonably fine. Moderate northeast wind.

Sent eight boats and two scow loads ashore to-day. Four boats and one scow were unloaded at hangar site in morning and the remaining four boats and one scow were to be unloaded at the Mission at high water at midnight. Work is progressing slowly ashore. One derrick is finished and ready for use. We have not yet succeeded in getting the rock drills properly tempered and are still experimenting. Hope to have them right to-morrow.

#### Saturday, September 17, 1927.

At 5.30 a.m. lifted anchor and proceeded towards the Button Islands to try and locate the *Raider* as she has been outside in the fog somewhere for several days. Cruised around in vicinity of Button Islands but thick fog outside. Master of *Raider* finally reported himself 60 miles off Chidley in thick fog so we turned back. We gave him our position several times but it would have been unsafe to venture outside into the fog as we would probably become lost and in the same plight as the *Raider*. Arrived at Port Burwell at 11.15 a.m. and anchored. The *Stanley* went out again about 4 p.m. but the *Raider* apparently went right on without delivering our cargo.

The unloading went very well to-day, ten boat loads and two scow loads being sent ashore. This is the record so far for Port Burwell. The sills for the hangar are being laid, the foundations for the power house are well advanced and the drilling for the anchorage bolts is making progress. A congestion of lumber on the beach was also cleaned up.

#### Sunday, September 18, 1927.

Unloading going ahead steadily. Got word Canadian Raider coming back to Burwell presumably on orders from Ottawa. Left Burwell 12.10 p.m. to meet her. Steamed in and out of there all afternoon but did not see the Raider. Returned Burwell 6 p.m. This business of running after the Raider is causing us delay. Four boat loads and one scow load sent ashore. We have been employing natives unloading on beach as we were short-handed and being Sunday they would not work, consequently we did not do so much to-day.

# Monday, September 19, 1927.

Left Burwell 4.40 a.m. to meet *Raider* and escorted her in arriving 7 a.m. We had our supplies unloaded at 9 a.m. and could have been finished sooner only the *Raider* crew knocked off for breakfast. The *Raider* left at 10 a.m. Work delayed to-day on account of heavy westerly wind. Only four boats unloaded. The tractor which came by the *Raider* was sent ashore in the afternoon as well as some other supplies that came by this vessel. The construction work is going ahead slowly but it should go ahead better very shortly. The excavation for sills of hangar and foundation of power house has been slow as many stones and boulders had to be removed.

Tuesday, September 20, 1927.

Weather cloudy. Variable wind.

Four boats and one scow loaded to-day. Sills for hanger laid, framing of power house going up, base for mast being put in, drilling for mast anchorage bolts making fine progress. Loading boats and scow again at night in order to discharge at high water about daylight in the morning.

Wednesday, September 21, 1927.

Beautiful calm day. Sent fifteen boat loads and three scow loads ashore. Were able to use part of falling tide in morning and rising in afternoon. Most of the material unloaded went to the Mission. No framing started yet on hangar but frame of power house practically finished. Both bases for Marconi masts completed. Loading boats and scow at night to be ready for morning tide.

Thursday, September 22, 1927.

Weather very fine, calm.

Only four boat loads and one scow sent ashore. Men employed carrying steel for masts up the hill and clearing up lumber on the beach at the hangars. Framing of hangar going up, one mast being erected and power-house being sheathed.

Friday, September 23, 1927.

Weather very fine. Light variable wind.

Five boats and two scows sent ashore to-day. Framing of hangar progressing favourably, power-house sheathing going ahead, one Marconi mast nearly finished, three holes drilled for anchor bolts of second mast, clearing lumber from beach at hangar. Several rocks blasted in order to lay another length of slipway. The *Raider* was to-day reported to be in touch by radio with Port Churchill.

Archdeacon Fleming of Toronto who has been here for a few days came aboard in the evening and held a very nice service for us.

Saturday, September 24, 1927

Sent the scow ashore at 7.10 a.m. loaded with the first fusilage case and landed it safely at the hangars. In the afternoon two boats and another scow were loaded to be discharged at high tide this evening about 8 o'clock. The remainder of the personnel of this base transferred ashore for good. The power house and one hangar are making fair progress and one Marconi mast was completed to-day. Had a message from Sqdn. Leader Lawrence stating that there is a shortage of eleven thousand feet of lumber at Base "C". It is difficult to understand how this can be but it means that we will have to take this lumber from Base "A" and bring it back to Wakeham Bay in the Larch. It is possible to do this as we are not erecting any of the dwellings at this base. It is necessary to bring the Larch back as it would not be safe to carry this lumber as a deck load on the Stanley.

Sunday, September 25, 1927

In the morning the large wing case was sent to the hangar site and safely landed and in the afternoon four boats and the scow with the fusilage case were taken to the mooring buoy all ready to be discharged at high water in the morning. Fair progress was made on the hangar and the power house is all closed in.

### Monday, September 26, 1927

Strong northeast wind. Light soft snow.

Lifted anchor 7 a.m. tried to go alongside Larch for coal but there was too much of a roll on so we had to come back and anchor. Unloaded fusilage case and three boats at hangars, also loaded scow and two boats with lumber for Wakeham Bay. Weather moderated in the afternoon and we put aboard the Larch one boat load and one scow load of this lumber and also loaded the scow with hangar steel and gasoline which will be discharged to-night at high water. The wet weather delayed the work on the buildings this morning but fair progress was made in the afternoon.

Tuesday, September 27, 1927

Strong westerly wind. Loaded one scow and sent it to hangar. At 7.15 a.m. lifted anchor, went alongside *Larch* and began coaling, 8.45 a.m. Had to stop at 12 noon as it got too rough. Anchored again 12.30 p.m. Could do no coaling in the afternoon. Work ashore going ahead slowly. One hangar partly boarded in, power house making some progress and second Marconi mast being erected. The construction crew had to sleep on the *Stanley* at night as it was too rough for them to go aboard the *Larch*.

The dredge being sent by the Department of Railways and Canals to

Port Churchill sank to-day somewhere off the Labrador coast.

### Wednesday, September 28, 1927

Wind moderated for a while in morning.

Loaded scow. Wind increased to nearly a gale. Got scow safely ashore, however, but unable to unload anything more or to take coal. Construction of buildings progressing fairly well. Sills of second hangar being laid, steel truss of first hangar nearly erected, foundations for engines of power house started and second Marconi mast slightly advanced. Had Marconi message from Captain Bernier on Hopper Barge No. 2, asking if there is any coal at Port Burwell. Asked the Department what we were to do in this connection as we could spare possibly 200 tons.

# Thursday, September 29, 1927

Weather fine. Moderate west to northwest wind.

One boat load and two seew loads sent ashore to-day and one boat load of lumber put aboard Larch for Wakeham Bay and another on Stanley for Nottingham Island. Transferred the construction gang from the Larch to the Mission where they will remain until Base "A" is completed. The truss for the first hangar erected, power house foundations ready for concreting, second Marconi mast almost finished. Captain Bernier with Hopper Barge No. 2 and convoy reports that he expects to reach Port Burwell to-morrow.

# Friday, September 30, 1927

Lifted anchor 7 a.m. and went alongside *Larch*. Began coaling 8.10 a.m. Loaded two scows and two boats. Stopped coaling 5 p.m. and anchored as it would not be safe to be alongside at night in the narrow harbour.

Hangar and power house making fair progress. Second Marconi mast

completed.

First flight to-day at Wakeham Bay.

# Saturday, October 1, 1927

Moderate northerly wind.

Hopper Barge No. 2, Ocean Eagle, St. Ann and scow arrived 7.30 a.m. Arrangements made to coal them with Stanley's crew. Captain Bernier in

charge of convoy arranged to pay these men 65 cents per hour by day and 70 cents per hour by night, the union rate at Halifax. They would not work otherwise and could not be forced to do so. The St. Ann was given 30 tons of coal by 3.30 p.m. which was all she required and at 4 o'clock work was commenced on Hopper Barge No. 2. This was carried on until 11 p.m. Hope to have the convoy on its, way to-morrow. The last scow load for this base was sent ashore to-day. Work on buildings progressing fairly well.

#### Sunday, October 2, 1927

Weather very fine. Strong northwest wind.

Coaling Hopper Barge No. 2 all day. The stevedoring crew went ashore and unloaded some boats. The motor launch for "C" base was broken down all day, trouble with magneto. Repairs finished in the evening. The tug St. Ann left about noon for Bathurst, N.B. Work on buildings carried on all day. Concrete bases in power house finished, hangars making progress. The Hudson's Bay Company's schooner Fort Garry arrived from Chimo in the evening.

#### Monday, October 3, 1927

Finished coaling Hopper Barge No. 2 about 11 a.m. Gave St. Ann 32 tons and Hopper Barge 88 tons. Stanley went alongside Larch and coaled until 5 p.m. when she came in and anchored for night. Will leave for Wakeham Bay with Larch at 5 a.m. to-morrow, weather permitting. Took three surf boats and scow on board Larch, one surf boat being left at Port Burwell until the return of Stanley and Larch for Wakeham Bay. Buildings going ahead steadily. One hangar is all covered in. Captain Bernier received orders from Ottawa to send Hopper Barge to Port Churchill, to winter scow at Port Burwell and to return with Ocean Eagle.

# Tuesday, October 4, 1927

Left Port Burwell 5.30 a.m. followed by *Larch* on course N. 19 W. magnetic for Wakeham Bay. Weather fine, moderate northeast wind. Passed *Hopper Barge* about 20 miles north of us at 4 p.m. No ice seen all day. Continued running all night.

# Wednesday—October 5, 1927

Came ahead all night, slow most of the time. Stopped for about an hour off Wales Island, then proceeded into Wakeham Bay, going in almost to the upper end as we had some repairs to make to the crankpins and the steering gear, and also as it was blowing too hard outside to discharge cargo. Anchored at 9.10 a.m. in 30 fathoms of water. This is a very fine harbour and we were landlocked twice when we anchored.

Repairs carried on all day and completed during the night. The Larch arrived some time after we did and anchored opposite the station.

Sent launch outside but weather too rough to make landing.

## Thursday—October 6, 1927.

Repairs to engine finished during night. Left upper end Wakeham Bay 7 a.m. and dropped anchor abeam of station. Discharged most of cargo of lumber brought from Burwell. Went ashore and inspected buildings. Men's dwelling complete outside, inside still to finish. Hangar No. 2 nearly completed, other buildings practically finished. All the lumber we brought from Burwell not required as Foreman Carpenter had made a mistake. Thought that double ceilings required in both dwellings. Will use balance of lumber to make extra

carpenter's shop. Expect buildings will be completed in about eight days. Gave instructions to master of *Larch* to remain at Wakeham Bay until further orders and also instructed stevedoring crew to go ashore and help finish buildings. The *Hopper Barge* passed Nottingham Island at noon to-day. Took coal from the *Larch* commencing about 3 p.m. and finishing at 10.30 p.m.

In afternoon made flight with Major Lawrence for about half an hour, did not go far as visibility poor. Left the Larch and anchored at 11.30 p.m. Took

aboard two families of Eskimoes and their dogs for Nottingham Island.

Friday-October 7, 1927.

Weather fine. Light southwest wind.

Left Wakeham Bay 6.45 a.m. Proceeded towards Nottingham Island passing along south shore of the Straits and south of Charles Island, off west end of this island 5 p.m. Continued all day until 8 p.m. at full speed when we modulated to slow, maintaining this all night.

No ice seen all day with exception of one berg.

Saturday—October 8, 1927.

Arrived Nottingham Island 7.30 a.m. Weather very fine, bright and calm. Unloaded all supplies for this base. Took motor launch "S" which had broken clutch aboard and replaced it by launch "C". Inspected the buildings which are not completely finished, there being a little work still to be done in officers' and men's dwellings and on No. 2 hangar. All of this work can be completed by the personnel. One plane is ready to take the air. We delivered the two families of Eskimoes with their dogs and goods and took on board the construction crew. I am not satisfied with the work of this crew as they have been here two months and four days and should have had work completed. Left Nottingham Island 2.20 p.m. for Wakeham Bay. Weather exceedingly fine and calm. Continued running all night as it was bright moonlight. Slowed for part of time to arrive by daylight.

No ice seen.

The work performed by the construction crew at Nottingham not very satisfactory as this crew has been on the ground for 64 days with a large gang to help them at the start and the buildings were not completed when they left. Sunday—October 9, 1927.

Weather very fine. Moderate northwest wind.

Arrived back at Wakeham Bay 10.30 a.m.

Transferred construction crew from Nottingham Island to Larch ready to go to work here in morning. Balance of day making out statements, etc., to send to Ottawa. Reports from shore are to effect that Base "C" will be finished about Wednesday.

Monday—October 10, 1927.

Moderate northwest wind. Good deal of snow in afternoon.

At 7 a.m. lifted anchor and went alongside *Larch*. Took coal until 5.30 p.m. when we let go and went to anchor. Shore work going ahead aided by men from Nottingham Island. Spent two hours on shore in the morning. Report now is that buildings will be finished about Saturday. In the afternoon engaged on board preparing reports, time sheets, etc., for Ottawa.

Tuesday—October 11, 1927.

Weather overcast—calm.

Lifted anchor 7 am. went alongside Larch. Took coal until 4 p.m. when our bunkers were full up. Let go and went to anchor. Put Stanley motor launch "S" aboard Larch. Work on shore proceeding well. Making out reports and getting correspondence straightened out.

Wednesday-October 12, 1927.

Weather dull—calm.

At anchor all day at Wakeham Bay. Ashore all morning going over the work and into the matter of routine flights with Major Lawrence. Work on buildings going ahead satisfactorily.

SS. Canadian Raider still at Port Churchill. No ice reported at Nottingham Island.

Mr. Leitch had a plane in the air vesterday.

All afternoon making up reports, etc., for Ottawa.

Thursday, October 13, 1927.

Moderate northeast wind. Overcast.

Anchored Wakeham Bay all day. In morning working at reports and returns for Ottawa. Ashore in afternoon and went over work. Good progress being made. We are endeavouring to get everything completed by Saturday or Sunday at the latest. Mr. Leitch made another flight to-day at Nottingham Island and reported no ice in sight.

Major Lawrence also made a flight here and reported no ice in sight.

Friday—October 14, 1927.

Snow all night. Moderate northwest wind. Very thick.

Had message late last night from Mr. Hawken stating was imperative go to meet Raider. Discussed matter with captain. He is very much averse to going west of Wakeham Bay at this date. However, it was agreed that we would proceed as far as possible when weather clears and wired message to this effect to Mr. Hawken. There does not appear to be any danger of ice at present. Report from Nottingham last night said no ice in sight. Had word from Raider that he expects to be at Nottingham Island about daylight to-morrow, which is very satisfactory. Packing up on board and getting out correspondence. Work progressing very favourably ashore.

Saturday, October 15, 1927.

At anchor Wakeham Bay all day. Intended to transfer ashore but weather too rough. Work on buildings going all day. Canadian Raider at east end Charles Island 4 p.m. No ice at Nottingham Island.

Sunday, October 16, 1927.

Weather cloudy. Light westerly winds.

Transferred ashore with Mr. O'Malley, Mr. Valiquette and our luggage. Work on buildings practically finished. Construction crew taken aboard the Larch. The Stanley left at 11 a.m., followed by the Larch about half an hour later, last ship sending three blasts in parting. Both ships were sent off with instructions to proceed to Port Burwell, the Larch to unload 20 barrels brick and the scow, which is to be loaned to the Raider, presumably for unloading coal at Burwell, the Stanley to remain there until work at Base "A" is completed. After the Larch has discharged cargo and scow, she is to proceed to Halifax. Notified Ottawa of these arrangements. The Raider passed Wakeham Bay during the night. All the hills in this vicinity are covered lightly with snow. Mr. Coghill reported good progress being made and expects to finish in a few days.

After ships left all hands engaged setting up beds and getting organized.

# Monday, October 17, 1927.

Variable wind-cloudy.

All day employed setting up stoves, organizing officers' dwelling and getting straightened out generally about camp. The Stanley and Raider arrived at Burwell at 7 a.m., followed somewhat later by Larch.

No ice at Nottingham to-day. Our radio is being very successful, getting through to Ottawa on short wave.

### Tuesday, October 18, 1927.

All day getting officers' quarters into shape and finishing up No. 2 hangar and the blubber house which Messrs. Lawrence, Carr-Harris and Laurie want to occupy, and, as it is not being used as a blubber house, this is satisfactory as it gives more room in the officers' quarters. The *Larch* left Burwell at 4.30 a.m. for Halifax. Notified the department seven passengers carried as well as part of the construction crew, one of the passengers being Archdeacon Fleming of Toronto.

No ice at Nottingham.

## Wednesday, October 19, 1927.

Moderate easterly wind—cloudy.

All hands employed all day getting quarters finished. Had report from Mr. Eisnor at Burwell that it would probably take two weeks to finish buildings at Base "A." Replied saying to rush the work as much as possible. Had message from the *Larch* that she is steadily proceeding south, with moderate weather. Communication by short wave with Ottawa continues satisfactory. We had Belle Isle by long wave to-night for the first time. Had a report to-day that Mr. Coghill at Burwell had a plane in the air yesterday.

# Thursday, October 20, 1927.

Strong easterly wind. Foggy.

All hands employed all day cleaning up camp, piling lumber and generally getting things ship-shape outside.

No ice at Nottingham.

# Friday, October 21, 1927.

Strong easterly wind—cloudy.

All hands again employed to-day finishing buildings. Reports from Burwell state that work is progressing well there. Observation house and powerhouse finished, also hangars with exception of chimneys.

Fainted again to-day the same as at Burwell September 17. The doctor examined me and says there is evidence of hardening of the arteries and advises my going out for the winter.

# Saturday, October 22, 1927.

Strong northeast wind—cloudy.

All day finishing buildings. Weather unfit for flying. Our radio worked the *Larch* in the evening off Cape Anguille. The doctor sent report to deputy advising that I return to Ottawa. I also sent message in this connection. This is a very great disappointment to me as I like the situation here and want to see the work through to a finish.

Sunday, October 23, 1927.

Quiet day in camp. Everyone taking it easy. Had service in the officers' dwelling at 10.30 a.m. Constable Murray with small party went to upper bay in motor boat and shot a small seal.

Monday, October 24, 1927.

Light easterly wind—cloudy.

Same work going on around camp as on Saturday, finishing buildings. Major Lawrence made a flight to-day but could do very little as it was pretty thick. Mr. Leitch also made a flight at Nottingham but same conditions obtaining there. Report from Burwell states work progressing well, hangars and power house completed, finishing up storehouse and making some repairs to the mission. Carried out a radio test on long wave with Base "A."

Tuesday, October 25, 1927.

Moderate northwest wind-cloudy.

Short flight carried out here this morning, visibility very poor. No ice. Leitch made two and one-half hour flight at Nottingham along south side of that island, across to Erik Cove, then to Salisbury. No ice.

Had word from department to return to Ottawa on account my physical condition. Had word that Base "A" will likely be finished by Saturday.

Wednesday, October 26, 1927.

Light northwest wind, thick and cloudy.

Occupied all day packing up to go back to Ottawa. Getting out general orders for the guidance of Major Lawrence during my absence. Work of finishing up buildings going ahead.

Thursday, October 27, 1927.

In morning made a flight with Major Lawrence. Very fine clear day. Went out as far as Wales island. Could see Big island quite clearly. No ice. The ss. Nascopic arrived while we were up. Took some pictures of her from the air. Ice crystals forming a little in Wakeham Bay this morning. No ice at Nottingham to-day.

Friday, October 28, 1927.

A flight made in the morning. No ice in sight here or at Nottingham. Packed up our luggage ready to go aboard *Nascopie* in the evening. Captain Mack of the vessel came to see us in the afternoon and had supper. Boat sent ashore for us and we went off with our luggage about 11.30 p.m. after saying good-bye to all the boys with great regret.

Saturday, October 29, 1927.

Left Wakeham Bay on *Nascopie* at 7 a.m. and proceeded all day towards Port Burwell. Weather overcast, moderate northwest wind. Had several messages from department in regard to arranging for some navigator to remain at Wakeham Bay for the winter. Spent the evening with Captain Mack and some of his officers.

Sunday, October 30, 1927.

Arrived at Port Burwell at 8 a.m. Went aboard the Stanley. Mr. Coghill came aboard and I went ashore with him and inspected Base "A" which was finished on Friday night. The construction crew is now waiting to return

to Halifax. Hangars, storehouse, power-house and observation house completed, and mission building repaired. One plane has been in air and another is being got ready. Everything at this base in satisfactory condition for the winter. Had another message from department to arrange for a navigator for Base "C."

Monday, October 31, 1927.

Strong northwest wind.

Anchored at Port Burwell all day. The Ocean Eagle, Nascopie and Canadian Raider are also in the harbour. The Raider is unloading coal on the beach. Messages being passed between ourselves and Ottawa mainly in regard to a navigating officer to go to Wakeham Bay for the winter. Captains Hearn, Mack and Bernier will not take the position. Captain A. A. King, First Officer of the Ocean Eagle volunteered and Ottawa was notified of this.

Tuesday, November 1, 1927.

Port Burwell all day. Went aboard Nascopie and found they had no suitable quarters for our construction crew, only in 'tween decks, unheated and unfitted which was out of the question at this time of the year and had we attempted to send men by the vessel the department might have been severely censured. Saw Captain Poole of the Ocean Eagle and again offered him position of navigation adviser to Major Lawrence. He would not accept. Offered it to Captain A. A. King who was satisfied to take the position. Notified the department to this effect. At noon went alongside Raider, took a little coal but had to cast off and go to anchor as it came on a blow. Expect Raider to leave shortly as they have stopped discharging and taken scow aboard. Advised department that it would be wise to send Ocean Eagle with Captain King to Wakeham Bay so as to save the coal of the Stanley.

Wednesday, November 2, 1927.

Moderate southeast wind, rain at night.

Port Burwell all day. At 7 a.m. went to Raider and took coal until 1.30 p.m.—taking 62 tons coal which filled up our bunkers. Went to anchor again. The Raider, Nascopie, Ocean Eagle and Stanley in harbour. Waiting orders from Ottawa in regard to which vessel, the Ocean Eagle or Stanley is to take Captain King to Wakeham Bay.

Thursday, November 3, 1927.

Gale, westerly wind.

About 9.30 a.m. had word from Captain Bernier that the Raider had struck a rock about 4.30 a.m. and was making water in No. 1 hold. We noticed after breakfast that they were apparently discharging coal over side but did not know reason. Captain of Raider said he would blow for Ocean Eagle if he needed her. Weather being very rough no way to go alongside. Had message about 1.30 p.m. that Raider had 18 feet water in No. 1 hold. Gale continued. About dark the Raider appeared to be less by the head and we had no further word from her.

Friday, November 4, 1927.

Strong northeast wind—overcast.

In the morning a survey was held on the damaged steamer Raider, the navigators making up the Survey Board were Captains Mack, Nascopie, Hearn, Stanley, and Bernier. It was found that the Raider had 18 feet water in No. 1 hold, the Master of the Raider stated that this water made in one hour after vessel touched yesterday morning. The vessel was also making water in the

forepeak and the water was gaining on the pumps. The surveyors were of the opinion that it would be unsafe to send the *Raider* out into the North Atlantic in her present condition, and advised that she be laid up for the winter in northwest cove opposite Hudson Bay Post with her bow just touching at low water and well anchored fore and aft. The opinion of the Surveyors was that the vessel would be reasonably safe in this cove which is also the only place at all suitable in the vicinity and that temporary repairs could be made to her in the spring and be brought out. In the afternoon she was brought into the cove, moored to the rocks and anchored.

Saturday, November 5, 1927.

Very mild, fine and bright. Moderate southeast wind.

Crews of Stanley and Ocean Eagle employed in getting Raider well moored in cove. The Master of the Raider got instructions from Ottawa in the late afternoon to lay his ship up for the winter. He requested that the Stanley and Ocean Eagle remain here to help him with the operation. Notified the department of this. Mr. Coghill setting up his second plane to-day.

Sunday, November 6, 1927.

Moderate southwest wind—Fair and mild.

Crews of Stanley and Ocean Eagle working all day to lay up Raider and the deck was practically laid up by evening. Sent some men ashore to get some lumber for closing in a certain part of the living quarters of this vessel in order to make it more habitable for winter.

Took measurements of coal piled on shore from the Raider. Make amount about 255 tons.

Captain Bernier got orders in the late afternoon to go to Wakeham Bay with Captain A. A. King, who is to remain there with Major Lawrence for the winter. He left in the *Ocean Eagle* at 4.30 p.m. We supplied the *Raider* with some provisions from our stores.

No ice reported from Wakeham Bay and none from Nottingham Island.

Monday, November 7, 1927.

Heavy easterly gale all day. Wind 58 miles per hour on wind gauge at Base.

At anchor Port Burwell all day. Worst gale we have had this season. Were able to get only a few men ashore to the *Raider* for a little while as it was too rough. It is reported that the *Raider* parted her port line forward and touched the rocks on her starboard side and that No. 2 hold is filling up. This report is at present unconfirmed. The work of laying up the *Raider* was going ahead but would have gone more quickly had we been able to put our men aboard.

The three bases are now ready to send meteorological reports and we will try to-morrow to arrange a schedule and route by which to send them.

Tuesday, November 8, 1927.

In the morning the Raider was beached in the Hudson's Bay Company cove and Nos. 2, 3, and 5 holds allowed to fill up with water as there is no other way to hold her in position. Our crew assisting in laying up this vessel; went around her at low water and noted damage and made memorandum in regard to this for file. Crew sleeping aboard Stanley at nights. The captain, chief engineer, second engineer, one fireman, one sailor and one cook are to remain with the ship and steam will be kept in one boiler. Our men working until after 9 p.m. Some lumber and stores sent aboard Raider in the evening. The

iumber is to house in the living quarters and make a wind break so that the men remaining may be reasonably comfortable. The Ocean Eagle on her way back from Wakeham Bay and expected in the morning.

Wednesday, November 9, 1927.

Gale sowthwest wind.

Raider laying up with a few men. Too rough to send any men ashore. Ocean Eagle arrived from Wakeham Bay 8.30 a.m. and anchored. Had message from Department saying we were to come out but to give all assistance possible in laying up Raider. Replied stating it would take ten days to completely lay up this vessel with assistance crew of Stanley and with the six men remaining aboard would take three weeks. Advised very strongly that we come out at once as we are responsible for too many passengers at this time of year for the North Atlantic, also that we have enough coal now to leave here. In a couple of days will require to take more and this practically impossible from shore pile and very difficult from scow. Asked for immediate reply.

No ice Nottingham, Wakeham or Burwell.

Thursday, November 10, 1927.

Strong northwest wind, cloudy.

The launch from the Base broke down coming out to the ship and went on the rocks near entrance to tickle going to Mission. Took a chance and sent two men in dory to Raider with general orders for her which came from Montreal yesterday; also a memorandum from Mr. Theriault, Chief Engineer of Stanley detailing work to be done to finish laying up and a message from myself asking what parts of ship had been flooded and how she was laying. It is essential that we get away as we will be needing coal again very shortly and very nearly impossible to get it from shore especially if any ice makes and weather much colder than now. About 2.30 p.m. the balance of the crew of the Raider with exception of Captain Bennett came aboard and stated they would not stand by the ship. Got two oilers, one fireman and one sailor from Stanley to stay and the chief engineer and second engineer decided they would go back. Informed Ottawa of this. Were standing by all day to leave but it was blowing too hard.

Friday, November 11, 1927.

In morning early, chief engineer of Raider, two oilers, one fireman and one quartermaster (sailor) from Stanley were put aboard the Raider, the captain and second engineer being already there. The chief engineer of the Stanley had remained aboard her all night. Written instructions in regard to laying up ship were given by the chief engineer of the Stanley to the chief

engineer of the Raider. Department notified of this.

At 9.45 a.m. E.S.T. lifted anchor and proceeded outwards. Strong northerly wind, very rough and choppy until we got into Gray Strait. After that the tide and the wind were behind us and it was not nearly so rough. The Ocean Eagle left about the same time and followed a couple of miles behind. Off Cape Chidley about 11.45 a.m. and squared away south. Fairly rough but making good weather of it with following sea ship rides easily. Continued on all day. Fine moonlight night, weather much the same. Notified Department that we had left.

Saturday, November 12, 1927.

Moderate west wind. On the run all night, moderate following sea, started rolling a little but doing well. Got no position to-day. Wind kept heading us all day and getting stronger. About 5 p.m. had to put her dead slow and just hold her to it. Very rough night. Four doors, ladder to bridge, hand steering gear and steering gear box went by the board. Leaking in stokehold tank. The whole of the accommodation was leaking, this caused by the straining of the vessel. Wind all night, was gale from south. Had the sea been a little worse the situation might easily have been very serious. This vessel is not suitable for the North Atlantic.

## Sunday, November 13, 1927.

The weather gradually moderated during the early morning. Wind S.W. Ship went ahead again at full speed at 8 a.m. Position at noon approx. Lat. 55 15' N. Lon. 57 05' W. Carried on all day until 7 p.m. when we eased off to slow. Again we had a very bad night with a gale of northwest wind and for a little while it was very serious. Three more doors were stove in in the forward end and every one was driven from their rooms there; water everywhere. The pumps plugged for a while but were eventually started about half capacity, enough, however, to take care of the water. This ship is not safe in very bad weather, she rolls too much and also is too low in the water.

## Monday, November 14, 1927.

Continued until 11 a.m. at dead slow, when the weather had moderated and we were in under the land somewhat. From this hour went ahead at full speed. We identified one position at Round Hill island about 9 a.m. Broken doors had been closed as well as possible by boarding them up but there is still a lot of water coming in as these doorways are not tight. At noon approximately 60 miles north of Belle Isle. Weather continued reasonable and we continued at full speed in order to reach a safe harbour before dark. Arrived in Nigger Cove at 6.15 p.m. and anchored for the night. To-morrow we will size up the situation and see what is to be done.

# Tuesday, November 15, 1927.

All day making repairs. Boarded up all doors, baling and pumping out deep tank, taking ice off ship, repairing bridge ladders, cleaning up accommodation, drying clothes, etc. Had conference with Captain Hearn and Chief Engineer Theriault and as a result of this conference sent message to the Deputy Minister of Marine that the *Stanley* is unseaworthy, that she should not cross the gulf and that we would proceed to Quebec as soon as possible, weather permitting and running only in the daytime, going into harbour at night, reasons for this are that the upper deck is badly started, doors broken, No. 2 hold leaking and tank not to be depended upon, also that in heavy sea the water comes in from the deck, washes coal into bilges and blocks the pumps. There are too many men aboard to take any more chances.

# Wednesday, November 16, 1927.

Anchored in Nigger Cove all day. Moderate westerly wind.

Trying to get deep tank clear of water and hard coal. Got coal out in the main but not able yet to get it clear of water, the pump is plugged and we have to bale it by hand. Had message from Mr. Johnston saying if I did not consider it safe to go to Halifax to proceed to Quebec. Working Ottawa direct from here short wave. About 10 p.m. succeeded in getting tank clear of water and coal.

Thursday, November 17, 1927.

Weather moderate, northeast wind.

Left Nigger Cove 7.30 a.m. proceeded towards Forteau Bay. Thick snow nearly all the way. Arrived Point Amour 2.30 p.m. and anchored, remaining there for the night. Reported our position and movements to Ottawa.

Friday, November 18, 1927.

Anchored in Forteau Bay all day. Heavy east wind until noon when it changed to a gale from westward. Lifted anchor 1 p.m. came across to Forteau for shelter and anchored there. Rain nearly all day and night. Reported to Ottawa.

Saturday, November 19, 1927,

Moderate easterly wind, some dead swell. Fog.

Left Forteau 8.30 a.m. coming up. Ran about full speed until 3.45 p.m. when fog became so thick that we had to reduce to slow. It was the intention to put in for shelter before dark but owing to fog this was impossible. Had a message from Lawrence at Wakeham Bay to say that some floe ice had been seen at Nottingham Island on the 16th but none at the other bases, also that no flying had been done since we left.

Sunday, November 20, 1927.

Heavy west wind. Fine.

Running slow until 3 a.m. when weather cleared and we went ahead at full speed. Wind changed to south and blew hard. Stanley making heavy weather of it. Made for Natashquan arriving there 11 a.m. and anchored to wait for better weather. The wind increased to a gale shortly after we made harbour. Our coal and fresh water getting short. Trying to arrange for coal at Clarke City.

Monday, November 21, 1927.

Moderate northwest wind, cold.

Left Natashquan 7.30 a.m. coming up. Weather very fine until about 2.30 p.m. when we ran into light fog. Abeam Perroquette light 3 p.m. Arrived at Carousel light 10.30 p.m. and turned into Seven Islands Bay. Anchored inside at 11.10 p.m.

Tuesday, November 22, 1927.

Heavy northwest wind all night.

Lifted anchor 7.30 a.m. and went alongside Clarke City wharf. Took 53 tons of coal and 3,400 gals. fresh water from the Gulf Pulp and Paper Company. At wharf all day and remained there for the night.

Wednesday, November 23, 1927.

Heavy northeast wind, thick snow.

Left Clarke City wharf 7.30 a.m. Crossed to east side of bay and anchored there for shelter. Very thick snow all day, so remained at anchor.

Thursday, November 24, 1927.

Strong north wind.

Left Seven Islands Bay 7.30 a.m. Carried on all day. Bic 8 p.m. Red Island about 11 p.m.

Friday, November 25, 1927.

Carried on all night. Arrived Quebec 7.40 a.m.

### LOG OF THE HUDSON STRAIT EXPEDITION, 1928

#### C.G.S. "MONTCALM"

From Quebec to Hudson Strait and Return to Quebec

Sunday, June 24, 1928

Everything on board and all ready. Left King's wharf, Quebec, 9.20 a.m. E.D.S.T., and proceeded out. Salutes were exchanged with all the local craft as this is our home port and we have many friends here. Weather wet and dirty, visability 3 miles. Crane island 1.10 p.m. Rain—weather—thick. Ran into fog about 6 p.m. at Cape Salmon. We are running easy and making about 8 knots. Everyone engaged getting shaken down, outfits sorted out and made ship-shape. One of the quartermasters was left on the beach this morning and we are to pick him up at Father Point during the night. We will also send man from there who is ill. Fog cleared below Red Island lightship about 8 p.m.

#### Monday, June 25, 1928

Carried on all night. Father Point 3 a.m. Took aboard one quartermaster who was left at Quebec and put ashore a trimmer who is sick. He will return to Quebec. Banks of fog and clear weather alternating all night. Pointe de Monts abeam 10.45 a.m. Fog—weather cleared about noon. Saw a number of whales. Stopped off Clarke City wharf about 8 p.m. and took aboard a trimmer to replace one put ashore at Father Point. Proceeded on our way again at 8.15 p.m. Weather cloudy—light N.E. wind. Sent off mail from Father Point and Clarke City.

### Tuesday, June 26, 1928

Under way steadily all night. Strong easterly wind. Cloudy with showers. Came down south side Anticosti island. At noon about 15 miles west of South Point Anticosti. Ran into fog at noon. Had to moderate to half speed as fog very dense.

We learned with great regret that Dr. Harris' father passed away suddenly

this morning.

Everyone pretty well shaken down and all gear ship-shape.

Fog cleared 10 p.m. and proceeded full speed. Had to slow again at 11 p.m. as fog thickened.

### Wednesday, June 27, 1928

Running throughout the night. Full speed again about 1.30 a.m. Anticosti (Heath Point) lightship abeam 8 a.m. Sun shining, visability about 3 miles at times, at others thick banks of fog. Position at noon 30 miles east of Anticosti lightship. Crossing Cape Whittle Bank at 5 p.m. Fog of varying intensity all day. At 6 p.m. fog so thick could not see ship's length; slowed to half-speed. At 11 p.m. same conditions.

# Thursday, June 28, 1928

Continued very slow all night. Fog very thick. Conditions the same in the morning. Flat island abeam 9 a.m. Half speed making  $4\frac{1}{2}$  to 5 knots all day. Cape Ferrol at 3 p.m. Passed close to a vessel stopped in the fog but could not make her out. Anchored in Forteau Bay at 8.30 p.m. Some ice about.

### Friday, June 29, 1928

Anchored in Forteau Bay, weather very thick and unwise to proceed. Shifting coal from after hold to bunkers forward and deck cargo into the hold. Sent mail ashore. Weather cleared somewhat about 4 p.m. Made some adjustments

to the compasses which were thrown out by motor boat being carried on forward deck. Left Forteau Bay 8.15 p.m. and proceeded outward.

Saturday, June 30, 1928

Under way all night, weather very fine. At 8 a.m. were outside and headed up the Labrador coast. Bright sunshine, calm all day. Position at noon 65 miles north of Belle Isle, at 2 p.m. Round Hill island abeam. At 8 p.m. abreast Bull Dog island, and at 10 p.m. had to stop completely as fog came down thick. Too many icebergs about to proceed.

Sunday, July 1, 1928

Fog cleared somewhat. Got under way again at 1.30 a.m. Fresh S.E. wind all day, thick fog. Position at noon approx. 55 deg. 33 min. North Lat., and 57 deg. 01 min. West Long. Had Divine Service in the dining saloon at 10.30 am.

Carried on all day. At 10 p.m. slowed to "slow speed."

Monday, July 2, 1928

Under way again at 1 a.m. Full speed. Ran all night. Very uncomfortable as ship rolling badly. Have been passing bergs all the way, but to-day passed a great many. Position at noon 58 deg. 01 min. North Lat., and 59 deg. 45 min. West Long. approx. In the afternoon less swell and ship steadier. Visibility very much better. At 10 p.m. slowed to half speed as the fog came down again and continued at this rate of speed all night.

Tuesday, July 3, 1928

At 7.30 a.m. fog lifted so we opened up to full speed again. At 9 a.m. abreast of the Four Peaks. No broken ice encountered in the Atlantic or Hudson strait. Easterly winds with occasional squalls of rain. Arrived at Port Burwell at 8.30 p.m. and anchored. All the personnel of the base as well as Corp. Nichols, R.C.M.P., Mr. Ford of the Hudson's Bay Company, and the captain and crew of the Canadian Raider" came aboard and remained until late. They were served with an impromptu meal which they all appeared to enjoy. Their mail was delivered, the first they have received since last summer.

Wednesday, July 4, 1928

At 7 a.m. began loading scow with what had been brought up, stores and fresh provisions, and this with a steer in a surf boat was sent ashore about 9 a.m. Some parcels also delivered to R.C.M.P., Hudson's Bay Company, and the Canadian Raider. As the weather outside was very thick it was decided to shift coal from the forward 'tween decks to the bunkers, as this would give a chance to straighten out the stores, etc., in this 'tween decks and get them ship-shape.

About 10 a.m. went ashore and inspected the Base quarters and found them in good order. Mr. Coghill reported that they had been very comfortable. The power house and radio masts were in first-class condition. The motor boat, scow and dories have been repaired and repainted and are in good order. Mr. Coghill reports his planes are in good shape. Weather cleared and we left Port Burwell 5.10 p.m. for Wakeham Bay. Ran into ice at 11.45 p.m. weather thick, stopped.

Thursday, July 5, 1928

At 8 p.m. last night in Lat. 60 deg. 40 min. North, and Long. 65 deg. 40 min. West we passed several bergs. At 11.45 p.m. met heavy loose packed ice in Lat. 60 deg. 52 min. North and Long. 66 deg. 47 min. West, about 25 miles off Akpatok island. Stopped until 3 a.m. when the ice had gone abroad somewhat and we pushed ahead slowly. Worked our way through about 20 miles of ice and ran into clear water, but with ice as far as could be seen about half a mile to the south. The ice we passed through could be classed as heavy open. At

times we had to slow and we figured our average speed was perhaps 7 knots. After proceeding in open water for about 12 miles we again encountered heavy open ice at 9.45 a.m. As far as could be seen from the bridge there was ice on both sides of the ship. As we went forward the ice became heavier and at 5 p.m. there was practically no open water in sight. The ice was fairly closely packed and our progress was very slow. At this time the ship was about abeam of Cape Hope's Advance. Measurements were taken to-day of one piece and it varied in thickness from 7 to 19 feet. Many others were seen which were undoubtedly very much heavier. Frequently pieces were turned over which were 10 to 12 feet thick. The Montcalm, an ice-breaker, was nursed very carefully through the ice to-day. A commercial ship having to make its way under similar conditions would be exposed to considerable risk as vessels of this type are unable to manoeuvre as well as an ice-breaker, and would be exposed to having the plating badly damaged and quite possibly injury to the propeller. At 7 p.m. no open water was to be seen and twenty bergs were in sight by actual count. The position of the ship was roughly abreast of Cape Hopes Advance. At 7.30 p.m. we stopped and took fresh water from a pan of ice by means of our gasoline pump. Took a number of photographs of the ice and about 300 feet of movie film. Pushed on again slowly at 9.30 p.m. until 11 p.m. when we stopped. It does not get really dark at present, only a couple hours of twilight.

### Friday July 6, 1928

Got under way at 2 a.m. Position 61 deg. 15 min. North Lat. and 68 deg. 40 min. West Long. Had to shear off to the north as ice packing in towards Cape Hope's Advance with northwest wind and it was impossible to make any real progress as well as there being danger of a nip. Proceeded on course north true to try and work out to open water. Ice very heavy and a number of icebergs. Got out into heavy open ice at noon and worked westward carefully. The forepeak is reported leaking. This is usual with this vessel when in ice. Position at noon 61 deg. 25 min. North Lat. and 68 deg. 43 min. West Long. From one to two p.m. practically clear water. About 2 p.m. ran into fog and at 3.30 p.m. into more open ice. Making poor progress as we can make only about 4 knots per hour. At 8 p.m. same conditions. This ice that we have been meeting for the last two days would very seriously damage a commercial vessel even if the vessel was rung down "dead slow" and only touched lightly as it is exceedingly hard and heavy, there being no "give" to it and it is to be treated with the utmost respect even by the best of ice-breakers. At 11 p.m. shot a polar bear. It had just killed a large seal. Stopped for the night at 11.15 p.m. Very thick.

# Saturday, July 7, 1928

Got under way at 2 a.m., proceeding through the ice at about 3 miles per hour. At 8.30 a.m. passed a berg at least 400 feet long and 50 feet high. Weather bright overhead but thick on surface. Stopped 9 a.m. ice packed ahead and very heavy-30 miles east of Wakeham Bay in mid-strait 9 a.m. ice heavy and fairly close. Moved ahead again at 9.30 a.m. Vis. 3 miles. Ran into fairly open water at 10.30 a.m. At 11.15 a.m. ice less widely scattered, broken smaller. Passing some bergs ice still heavy. Position at noon 61 deg. 59 min, North and 70 deg. 50 min. West. Headed across strait for Wakeham Bay. At 12.45 p.m. meeting pretty closely packed heavy ice. Had to work north towards open water. Had to proceed "dead slow" with utmost care. Thin fog most of day with bright sun overhead. Have taken many photographs and several reels of movie film. Ice 15 to 20 feet thick, very common. At 3.45 p.m. fog lifted and found ourselves 20 miles off eastern end of Big island. Stood in to get good departure. At 5 p.m. shaped our course off Big island beacon for Charles island. Saw berg near Ashe inlet three-quarters of a mile long, 60 feet high. Clear water on this course for 5 miles. Ice is so heavy it is wise to keep to the edge of the pack.

Running about 3 miles an hour going very carefully. Saw berg 25 miles to the northwest of the east end of Big island at least 2 miles long. Ice more open but very heavy on this course and able to run at about 8 knots in places. Main body of ice to the south of us. The bear was skinned and cut up to-day, the meat to be saved for the Eskimo at Nottingham.

Sunday, July 8, 1928.

Carried on all night, steering through heavy open ice and which grew less. At 6.30 a.m. at west edge of pack in aprox. 62 deg. 28 min. North and 71 deg. 51 min. West altered course for south shore. Steamed around west end of ice and shaped course from point 10 miles off King Georges Sound for Wakeham Bay. We are running in open water 15 to 20 miles wide; south side of pack is about 8 to 10 miles to north of us. Mr. Carr-Harris came out in plane and met us about 9 a.m. Divine Service was held in the Dining Saloon at 10.30 a.m. Weather very fine, moderate N.W. wind. Arrived Wakeham Bay 1.30 p.m. and anchored. Mr. Lawrence and Mr. Walsh came aboard and reported. Later went ashore and inspected the Base, which is in first-class condition. The motor boat which went ashore last Fall and was badly battered is not in commission, but can be temporarily repaired later to be brought back. The whole of the personnel had supper on board. Afterwards there was a game of base-ball between teams from Base "C" and the headquarters staff on the Montcalm which created a good deal of fun. Incidentally the game was won by the ship's outfit. Supplies of fresh provisions, mail and a steer were put ashore in the afternoon.

Monday July 9, 1928.

Left Wakeham Bay at 7 a.m. proceeded westwards. Weather fine and bright, westerly winds, no ice. Position at noon 62 deg. 20 min. North and 72 deg. 10 min. West. Abeam of Wagges island we commenced to pass considerable heavy open ice to the north of us. This ice from four to five miles wide in places. Captain Hearn, who has had considerable experience with Hudson Bay ice says that in his opinion none of this ice we have seen since entering the strait comes from there but must be from the Fox Channel and Fox Basin. As we progressed the heavy open ice was more and more across our course and a little to the east of Cape Weggs it reached the shore and we were surrounded by it again. Had to shear off to the north of Charles island as ice appeared to be very much open on that side. Ice abreast of Charles island heavy open same as we have had all the way from Weggs island. At times we were on the northern edge in clear water and at others had to slow to make our way through.

Tuesday, July 10, 1928.

Steamed ahead all night. From west end of Charles island to 40 miles west we came through practically open water. From this point to Nottingham island meeting strings and large patches of heavy open ice, and there was a great deal of ice all about us. Weather very clear and calm. Ice streaming down past Salisbury island. As far as can be seen nothing came from Bay and we can see Mansell island. Arrived at Nottingham island at 11 a.m. Mr. Leitch came off with motor boat and took some supplies and our own launch and surf boat took remainder and steer. Did not go ashore as too much ice and cannot take a chance to get separated from the ship. Mr. O'Malley transacted some business on shore. Too much ice to remain at Nottingham. Left there at 2 p.m. for Sugluk Inlet to take fresh water, going towards Erik Cove after leaving Nottingham to get into clear water, and continued on to Sugluk where we arrived at 1 a.m.

Wednesday, July 11, 1928.

Weather very fine and warm. At 7 a.m. began taking water in boats from a stream close to the ship. Took on 35 tons up to 5 p.m. and when tide rose again so that boats could get in took 20 tons more after 10 p.m. Made trip up

inlet in motor boat in morning and took some soundings. Got general idea and do not agree with chart. Mr. Leitch arrived in plane from Nottingham at 8 p.m., reporting that he saw practically no ice. He left again going back at 9 p.m.

Thursday, July 12, 1928.

Left Sugluk inlet at 7 a.m. proceeding east along the coast. Weather fine and calm. Off Foreman island, Charles island 12.30 p.m. Anchored inside Charles inlet 1.20 p.m. No ice in sight until we reached Charles island when there was considerable heavy open ice to be seen to the north and east. The Engineers had to make some repairs to the condenser. About 3 p.m. took the launch and examined the inlet and after supper worked along shore to the eastward for about 5 miles. There are many deep inlets running parallel to the length of the island. Remained at anchor for the night. Made a couple of drags with drag nets for Mr. Taylor, Biologist, and he obtained some interesting results.

Friday, July 13, 1928.

Left Charles island 7 a.m. condensers repaired. Weather fine, bright, calm. Proceeded towards Wakeham Bay in open water. Heavy open ice to the north of us about 8 miles off the south shore. One of the planes came out about 6.30 a.m. As we worked eastward strings occasionally extended across our course. Put Messrs. Madill, Taylor and Valiquette ashore at observation camp, former to take magnetic observations and Mr. Taylor to do Biological work until we leave. Continued on up into upper end of Wakeham Bay and anchored at 7.30 p.m. in 35 fathoms. Will shift coal to-morrow.

Saturday, July 14, 1928.

Strong S.W. wind with heavy smoke. All day shifting coal until 11 p.m. Moved 117 tons from fore hold and 109 tons from after hold to bunkers. Blowing hard all day. Intended going to Base but too rough to make a landing. Arranged with Mr. Grassett of Révillon Frères for the use of his motor boat for two or three weeks until the boat for Base "C" arrives by Larch. Port Burwell still pretty well blocked with ice and ice all about there. Practically no ice at Nottingham.

Sunday, July 15, 1928.

Weather fine, moderate westerly wind. Left upper end of Wakeham Bay at 10 a.m. Came out and anchored off Base at 11 a.m. Mr. Grassett of Révillon Frèrés had dinner with us. Ashore in afternoon and went into a great many details with Mr. Lawrence in regard to packing up outfit and shipping it out, etc. He gave me some photos of Cape Hope's Advance which are very good. Had a number of visitors aboard from the Base, Hudson's Bay Company and Révillon Frèrés. Weather very warm to-day. Arranged to use Mr. Hall's motor boat for a while in place of that of Révillon Frères as it is a more suitable boat. Mosquitoes very troublesome.

Monday, July 16, 1928.

Left Wakeham Bay at 6 a.m. proceeding out. Stopped at observation station and picked up Messrs. Madill, Valiquette and Taylor. Proceeded out again at 8 a.m. towards Cape Hope's Advance. At noon about 25 miles east of Wakeham Bay. Ran into widely scattered heavy ice about 12 miles off shore. Much more ice to the north of us and quite a few bergs. Ice always to the north but appeared to be more open and greatly reduced from what it was when we came west. Anchored in 25 fathoms inside Diana Bay close to

Cape Hope's Advance at 8 p.m. The weather has been very warm for this section, warmer than has been known for years we are informed by the natives.

Tuesday, July 17, 1928.

Went away in launch at 6 a.m. with Messrs. Walsh and Madill. All day looking for a good site for a D.F. station on north side of Cape Hope's Advance. Have two prospects both with fresh water but the rocks are high and a good deal of work will be required to get building materials and general equipment into position. Will go over these positions again in the morning. The chart here is not reliable at all. It shows an island north of Cape Hope's Advance which does not exist and Diana island is not nearly as large as shown. Saw ice stranded along the shore standing 25 feet out of the water. Walked at least 6 miles to-day climbing the highest rocks and searching for suitable site.

Wednesday, July 18, 1928.

Thick fog and rain. Remained at anchor. Shifting coal from afterhold to bunkers. Too thick to re-examine sites for D.F. station. Weather continued dirty all day. Made an attempt in afternoon to go ashore but wind was increasing so returned to ship. Report received yesterday states that the ss. Larch left Halifax on the night of the 16th for the Hudson Strait.

Thursday, July 19, 1928.

Gale of N.W. wind all day. Fog until about 3 p.m. when it cleared off. Shifted positions about 5 a.m. and got more into lee of unchartered island. We had already taken soundings all around the island and found good water. Too rough all day to launch boats. At 9 p.m. wind had moderated a little but it was still blowing hard.

Friday, July 20, 1928.

Weather fine and clear. Light S. wind. Went ashore on the unchartered island which we have named "Hearn" island. It was still too rough to make a landing at Cape Hope's Advance. Mr. Madill is taking observations on Hearn island for latitude and longitude so that we can get an approximation of our position. No water on this island and too far inside bay to suit for a D.F. station.

Mr. Lawrence flew over from Wakeham and reported could see north side of strait and only ice in sight small bergs and growlers. Could also see these from top of island. In afternoon went to Cape Hope's Advance, went over ground with Mr. Walsh and finally settled on site for D.F. station, which should be satisfactory as it can be easily calibrated through an arc of almost 180 degrees, east to west, without crossing the land. Getting materials and equipment up to the site will require some labour as it has to be moved from the beach about 600 or 700 feet and up hill about 300 feet. Filled the forward fresh water tank in the evening. Port Burwell harbour full of ice.

Saturday, July 21, 1928

Left Diana Bay at 7 a.m. proceeding towards Burwell. Weather calm, overcast, light fog. Numerous bergs and growlers about. Position at noon, Lat. 61·16 North, Long 68·41 West. Continued all day, ice conditions being practically the same. About 8 p.m. moderated to dead slow in order to arrive at Burwell by daylight in the morning. The Larch reported to-day about 200 miles north of Belle Isle. Ice conditions at Burwell improving. The schooner Morso was at the entrance to the strait this morning.

Mr. Leitch reported that Dr. Wickwire had discovered two cases of small-pox at Erik Cove and had the situation in hand. This was reported to the Nascopie and to Ottawa.

Sunday, July 22, 1928

Continued all night very slowly. At 5 a.m. ran into strings of heavy ice about 15 miles outside of Burwell. Ran through several of these slowly until we arrived in clear water when we again went full ahead. Shot a bear and its cub on the ice coming through one of the strings. Ice is now coming out of Ungava Bay. Port Burwell at 8 a.m. and anchored. Fair amount of scattered ice in harbour, and planes cannot take off as there is too much ice. All the ice is greatly wasted since we first met it on the way west. Put ashore some odds and ends of supplies where were overlooked when we were here first. Dense fog came down about 10 a.m. and lasted until 3 p.m. At dinner and supper we had visitors from the Base, the R.C.M.P. and the Hudson's Bay Company. Mr. Berthe of the Révillion Frères came aboard in the morning. Mr. Carr-Harris who came with us from Wakeham to take back the plane left here last winter went ashore. Larch abeam Cape Mugford at noon.

Monday, July 23, 1928

Left Port Burwell at 4 a.m. proceeding towards Resolution island meeting strings of ice and open ice. Fog came down about 7 a.m. though there was a bright sun overhead, we had to run slow until 12 noon when it cleared. About 15 miles from Burwell got clear of the ice with the exception of quite a number of bergs. Position at noon Lat. 61·05 North Long. 65·25 West. Many large bergs near Resolution island. Arrived off Beacon, Acadia Cove 3 p.m. Worked north along coast about 3 miles from the beacon, bergs and heavy ice coming along shore with current about 5 knots. No possibility of going ashore here at present. A number of very large square flat topped bergs about. At 6 p.m. shaped a course for the Buttons. Will look for a site there if weather permits. Ran into strings of ice at entrance across strait. At 10.30 p.m. moderated speed to "dead slow" to wait for daylight in order to go into the harbour (Minto anchorage) at the Button islands.

Tuesday, July 24, 1928

Under way all night "dead slow" to keep away from the land. Arrived at Button islands and anchored at 8.30 a.m. Left in the launch at 9 a.m. and went to Lacey island. We explored this thoroughly for a site for a D. F. station. Found an ideal place on the highest point overlooking Hudson Strait, at an altitude of about 800 feet and probably a mile and a half from the landing place, which is also ideal and boats could be unloaded at any stage of the tide. There is an excellent water supply available. The site, however, cannot be used owing to the difficulty of transporting the material and equipment. The Button islands anchorage is excellent and it is practically landlocked. The Larch arrived at Port Burwell about 11 a.m. to-day.

Wednesday, July 25, 1928

Left the ship at 7 a.m. with Messrs. Madill, Walsh and Valiquette. Went to Goodwin island and examined it thoroughly. There is a very good site for a D. F. station with first class water supply but it is very doubtful if the station could be completed in one season as the transportation of material would be very difficult. Examined the Beacon on this island and it appears to be in good order. Got back to the ship at 4 p.m. Remained at anchor for the night.

Thursday, July 26, 1928

Left Button islands 3 a.m. arrived Port Burwell 6.10 a.m. Went alongside Larch and took 150 tons coal and filled our tanks with fresh water. Took scow

and tractor from base aboard the *Larch*. The *Nascopie* and *Ungava* of the Hudson's Bay Company both here. All the above work finished at 12 midnight. Remained alongside *Larch* for the night. Constable Montague, R.C.M.P., attached to Base "A" came on board.

Friday, July 27, 1928

Weather wet and dirty. Left Port Burwell 2 a.m. followed by Larch. Proceeded towards Cape Hope's Advance. Met some scattered ice of no consequence about 10 miles west of Port Burwell. Passed a number of bergs from time to time. Arrived in Diana Bay close to Cape Hope's Advance at 8.45 p.m. and anchored. The Larch arrived about an hour later.

Saturday, July 28, 1928

In the forenoon getting ready to unload cargo from Larch. Examined a place to anchor on east side of Cape Hope's Advance and found it suitable. In afternoon began discharging. Sent 6 boatloads of lumber ashore and about half of this landed above high water mark and the remainder moved up the hill. This is a very fair start for the first day. Did not work in the evening as the men are "soft" and were rather tired. Last year the first unloading was done on August 4. Put in a mooring for the scow or boats. The intention is to get two buildings roofed in as soon as possible in order to get the construction crew ashore, so that in event of weather being too rough to send boats ashore work will still go on.

Sunday, July 29, 1928

Thick fog all day. Began unloading 7 a.m. and carried on until 6 p.m. Construction crew had lunch ashore. Sent 8 boats and two scow loads to the beach. Two tractors were unloaded in the morning and in the afternoon at work dragging material up the hill. We now have lumber strung out all the way from above high water mark to the site of the station. Did not attempt to work in the evening as the wind increasing and there was considerable lop on.

Monday, July 30, 1928

Impossible to do any work in the morning as it was blowing too hard with heavy rain and fog. Weather moderated somewhat at noon. At 1 p.m. went ashore with all the construction crew and walked across the hills to the site. Moved a considerable portion of the lumber up the hill. Rain came down again at 4 p.m. but continued to work until 6 p.m.

Tuesday, July 31, 1928

Weather unsettled. Began work at 7 a.m. By 3.30 p.m. had sent 8 boat loads of lumber ashore but as there was considerable sea had to stop the boat work, but continued until 6 p.m. moving lumber, etc. up the hill. Fog came down again about 4 p.m. Three men returning over the hill took a wrong turn and were lost. Kept flares and siren going until 10 p.m. (thick fog over hills) and parties sent ashore to search without success.

Wednesday, August 1, 1928

Men from the *Montclam* went out again at 3 a.m. and a large party of about 40 men started out at 8 a.m. to sweep right across Hope's Advance peninsula to Ungava Bay. The three missing men were found about 9.30 a.m. not very far away. The last of the search parties did not return until 4 p.m. The large launch from the *Montcalm* and the small launch from the *Larch* went around the Cape into Ungava Bay but found no trace. This trip was rather hazardous as the wind increased and there was a heavy swell running off Hope's Advance. Luckily all returned safely. No work was done to-day as all pretty well tired out.

Thursday, August 2, 1928

Weather wet with fog, northeast wind. Were able to send only three boat loads of lumber ashore in morning and were compelled to stop as it got too rough. Moving materials up the hill for balance of the day. The peninsula south of Cape Hope's Advance reported to be fairly flat with many small ponds and lakes.

Friday, August 3, 1928

Weather very fine all day. Light variable wind. There was a good deal of surf at the landing cove and we had to stop unloading for an hour and a half in the afternoon. Sent 9 boat loads ashore up to 6 p.m. and in the evening went back with a scow loaded with a tractor, broken stone and cement which was successfully put ashore. We had to grope our way back by following close to the shore line in the worst fog we have had this season.

Saturday, August 4, 1928

Calm, bright, with occasional banks of fog in the morning. Began work at 7 a.m. finished at 7.30 p.m. Unloaded 9 boats and 2 scows. The frames of the storehouse are up and part of the sheathing is done. Considerable material was moved up the hill by the tractor. Mr. Carr-Harris passed over at 11.30 a.m. flying from Port Burwell to Wakeham Bay. Some bergs are passing eastward daily but apart from these we have seen no ice since we left Port Burwell last.

Sunday, August 5, 1928

Weather, fine bright, light variable wind. Left ship at 7 a.m. with construction crew and got back at 7.30 p.m. Sent 10 boat loads and two scows ashore. Lost about an hour and a half at low tide as rocks too slippery for men to work on. The falling tide flows out very strongly between Hearn island and Cape Hope's Advance and to the eastward along the Cape and in the reverse direction with the flood tide. Icebergs coming down the strait eastward pass about 5 miles off the land.

Monday, August 6, 1928

Weather very fine, light variable wind, practically no swell to-day. Unload 6 boats and 4 scows. At 6 p.m. fog came down so thick could only see about 100 yards, but we managed to get ashore with two boats and discharge them. Work on buildings going ahead very satisfactorily.

Tuesday, August 7, 1928

Weather fine, heavy southeast wind from noon. Left ship 7 a.m. carried on unloading until 2 p.m. when it became too rough to handle boats alongside and had to stop. Had sent 4 scows ashore at this time. Construction crew working on buildings which are going ahead nicely and also moving material up the beach to a point where it can be taken by the tractors and transferred to sites.

Wednesday, August 8, 1928

Rain, fog and surf in morning but cleared at noon. Left ship at 7 a.m. worked all day and finished at 10 p.m. Sent 4 boat loads and 5 scow loads ashore. Work going on very satisfactorily both as regards unloading and the construction of the Station buildings, as well as the movement of material and equipment up the hill. Fog again in the evening.

Thursday, August 9, 1928

Weather very fine, light southeast wind. Began work at 7 a.m. sent 3 boat loads and 4 scow loads ashore to-day, the last scow going in the evening. Transferred the working crew of about 30 men with their baggage to the station, where most of them will live in the storehouse and a few in tents, the Eskimo shelter

being used as a cookhouse. The discharging at this Base is finished and it is the intention to leave for Wakeham Bay at daylight to-morrow morning. Discharged altogether at Hope's Advance 67 boat loads and 23 scow loads.

Friday, August 10, 1928

Lifted anchor at 3 a.m. and proceeded towards Wakeham Bay followed by the *Larch*. Heavy rain and some fog. Slowed down at 10.45 a.m. to make the land. Entering Wakeham Bay at 12.45 p.m. Stopped half way up to take fresh water but it was too rough. Came on up to the upper end of Bay, the *Larch* behind us. The latter anchored finally at 6 p.m. and we went alongside her and began taking coal. Stopped work at 11 p.m.

#### Saturday, August 11, 1928

Weather fine, southwest wind. Began taking fresh water from shore at 3 a.m. and coaling at 7 a.m. Loaded scow and two boats for Base "C" but heard at 10 a.m. that it was too rough for discharging. Wind moderated and at 12 noon started with two loaded boats and took them to the base, came back and brought loaded scow in. In unloading this it went aground as tide falling and we will not be able to get it before to-morrow morning. Montcalm came out and anchored off Base at 8 p.m. followed by the Larch. Took 170 tons of coal in all and 60 tons of drinking water. Left launch that wintered at Halifax at Wakeham Bay.

#### Sunday, August 12, 1928

Weather fine, bright, westerly wind. Left Wakeham Bay with Larch at 6 a.m. proceeding towards Nottingham island. Passing a few bergs from time to time. Divine Service was held in the Dining Saloon at 10.30 a.m. Position at noon Lat. 62·27 North, and Long. 72·50 West. Our course takes us between Charles island and the south shore of the strait. About 5 p.m. it came on to rain and weather more or less thick. Under way all night. Heavy thunder storm about 2 a.m.

### Monday, August 13, 1928

Strong south wind with fog. Arrived at Nottingham island in thick fog and anchored at 5.45 a.m. Wind strong all day. Fog all day. At 6 p.m. lifted anchor as wind increasing and proceeded towards Erik Cove. Got into the shelter of Digges island and Wolstenholme about 9.45 p.m. Off shore in shelter all night.

# Tuesday, August 14, 1928

Weather wet, heavy southwest wind. Came in and anchored at 6.45 p.m. Larch already in. Took 65 tons of fresh water. The quarantine against small-pox was lifted by Dr. Wickwire. Had word that motor boat at Wakeham Bay had gone ashore during storm and was considerably damaged. In the evening Mr. Melton of the Hudson's Bay Company and Corporal McInnes of the R.C.M.P. came aboard, the latter was with us until recently at Nottingham island and is being transferred to Burwell as Officer in Charge.

## Wednesday, August 15, 1928

Left Erik Cove 3.15 a.m. followed by *Larch* and crossed to Nottingham arriving at 7.45 a.m. Got boats and scows overside and began unloading. Sent four boat loads and one scow load ashore during day. The construction crew of 10 men slept ashore at night and we will be able to carry on even if the weather turns rough and we are driven off shore.

#### Thursday, August 16, 1928

Began work at 7 a.m. Were only able to send 5 boats and two scows ashore during day and had to unload one boat and one scow in the evening. If weather

fine to-morrow one scow load will finish the discharging. Dense fog from about 4 p.m. to 8 p.m. A large part of the material sent ashore has been moved up to the buildings.

#### Friday, August 17, 1928

Sent one scow load ashore in morning which is the last. About three-quarters of material and supplies have been moved up to buildings. Excavation for anchorages started. Moved the stevedores ashore in the evening to help in the work as they will not be needed on the *Larch* for a while. Prepared mail to send to Erik Cove to-morrow including letter to Mr. A. Johnston, Deputy Minister, giving outline of the work we have done to date. Also sent some photographs.

#### Saturday, August 18, 1928

Left Nottingham island 4.15 a.m. on course to Wostenholme taking a "section" for Mr. Taylor, Biologist. This consists of taking temperatures at regular intervals, dragging nets for samples, etc. Not very successful as his thermometers were out of order and one net carried away. At 11 a.m. off Wostenholme section completed. Proceeded towards Sugluk inlet and arrived there at 7 p.m. and anchored for the night. As men have been working every Sunday for sometime will give them best part of day to-morrow to do washing, etc.

#### Sunday, August 19, 1928

Remained at anchor at Sugluk inlet all day, doing washing, etc. Captain Hearn set out his nets at the head of the inlet and got a considerable catch of salmon, which are being welcomed as we have been out of fresh provisions for ten days. We were visited by Mr. Hall who has a trading station here. Weather fine.

# Monday, August 20, 1928

Strong easterly wind, left Sugluk inlet 2 a.m. going towards Wakeham Bay, arrived there at 4.15 p.m. and anchored. After supper when the tide was rising put spare pontoon, which we had brought from Nottingham ashore. Mr. Lawrence and Captain King came on board, the former hopes to leave for Ottawa on Friday next.

# Tuesday, August 21, 1928

Left Wakeham Bay at 2.45 a.m. Proceeded towards Charles island, arrived abeam bay centre of this island and sent launch to sound. Found a suitable anchorage. Too rough to land. Anchored in bay middle of north side of island at 6 p.m.

# Wednesday, August 22, 1928

Strong easterly wind. Too rough to make landing. Lifted anchor at 9 a.m. and proceeded off shore. Some fog which by 10 a.m. had become dense. Kept dodging on and off shore all day. Very heavy swell. Ship rolling badly. By 7.30 p.m. wind had moderated and fog cleared. Anchored again in bay on north side of Charles island.

# Thursday, August 23, 1928

At 7.30 a.m. away in launch with Mr. Walsh, cruised to west along north shore of Charles island looking for site for a D.F. station. Went about five miles west when weather became so wet and dirty that we had to return to ship at 10 a.m. Remained at anchor all day. Wind increased to a gale from the southwest, but as we were in the lee of the island we were all right.

Friday, August 24, 1928

Anchored Charles island, weather fine, strong southeast wind. Blowing too hard in morning to go ashore. Wind moderated and at 12.30 p.m. left ship. Went west  $2\frac{1}{2}$  miles. Examined two possible sites but neither would do, though there is plenty of fresh water everywhere. At 3 p.m. had to head back to ship as wind increasing. Got back about 4 p.m. and just in time to get launch in as it was again becoming pretty rough. Rain began about 5 p.m. and continued all evening. Remained at anchor.

Saturday, August 25, 1928

Anchored Charles island bay all day. Weather too rough in morning to go ashore. In the afternoon though somewhat better still too unsettled.

Sunday, August 26, 1928

Left ship at 7.20 a.m. with Mr. Walsh and examined two sites for D. F. station. One very satisfactory gives about 210 deg. of arc, sand and gravel right on the site, materials can be moved from boats to site with tractors, shelter for boats, anchorage for ships good for certain winds. There are three small islands the northernmost at west end of bay on north side Charles island, the next south of this and the third is the site for the D. F. station to south of middle island.

Left Charles island going towards Sugluk Inlet at 1.10 p.m. and anchored well up in the inlet to take fresh water and coal from the Larch when she arrives.

SS. Canadian Trooper passed going out while we were anchored at Charles

island.

Monday, August 27, 1928

At anchor in Sugluk inlet all day. Took some fresh water. Larch arrived at 6 p.m. and anchored. Went alongside at 8 p.m. and began coaling. Captain Hearn set his nets and got quite a number of fine trout. Coaling all night.

Tuesday, August 28, 1928

At anchor Sugluk inlet all day, taking coal and fresh water, finished at 8 p.m. Took 56 tons coal and 140 tons fresh water. All the planes arrived at Erik Cove to-day but could get no further owing to unfavourable weather.

Wednesday, August 29, 1928

Left Sugluk inlet at 5.45 a.m. accompanied by the "Larch." Had word from Flight Lieut. Leitch, who returned to Nottingham island to send word, that Flight Lieut. Coghill crashed at Erik Cove this morning and plane wrecked. Arrived Erik Cove at 12.45 p.m. Squadron Leader Lawrence came on board and reported that Mr. Coghill had badly damaged his plane taking off in the morning and that three of the five planes were unfit to continue the flight to Ottawa and in view of this and as the other two might be expected to show defects it was not wise in his opinion to continue the flight. Reported this condition of affairs to Ottawa and suggested that the "Canadian Voyageur" should pick up the planes at Erik Cove on her way back from Churchill and take them out.

Thursday, August 30, 1928

All day dismantling three planes. Took wings off two and wings and engine and floats off one that crashed. The pontoons and wing of latter plane all damaged beyond repair in opinion of Mr. Lawrence. The fusilage and engine might be serviceable after an overhaul. Mr. Melton who towed the crashed plane to shore is claiming salvage. Our people had not given it up though away from it for the moment getting the other planes to safety. Reported this salvage claim to Department and asked to be advised what to do. The damaged plane

is on the beach until we receive instructions from Ottawa. Made arrangements with Hudson's Bay Company (Mr. Parsons) to take out part of personnel from here.

Friday, August 31, 1928

Went ashore at 7 a.m. dismantled and loaded aboard the "Larch" two planes complete and the plane that was seriously damaged, less part of wing and one pontoon. The SS. "Ungava" of the Hudson's Bay Company came in at 5 p.m. and took Messrs. Lawrence, Coghill, Ashton, Laurie, Clothier, Black, Terry, Warner and Ewart. They will go to Port Burwell, change to SS. "Nascopie" and from there to St. John's Nfld., and Ottawa. Mr. Leitch flew from Nottingham island to Erik Cove and thence to Wakeham Bay, and Mr. Carr-Harris from Erik Cove the same place to-day. Their planes will be dismantled there and go out later.

Saturday, September 1, 1928

Fog in early morning. Left Erik Cove at 7.45 a.m. going towards Nottingham island. Had to turn back on account of fog. Anchored again in Erik Cove at 9.50 a.m. Took 40 tons fresh water. All tanks now full and also changed water in boilers. Dense fog at Nottingham with strong west wind which will prevent boats going ashore.

Sunday, September 2, 1928

Left Erik Cove with Larch at 5.30 a.m. proceeded towards Nottingham island, arrived 9.45 a.m. Went ashore and began loading boats and sending them abroad Larch. Sent out five boats which cleaned up all the airplane spare parts, etc. The work of rigging the mast finished in evening. The insulating of Power House should be all finished tomorrow. Inventories being finished up and surplus equipment packed,

Monday, September 3, 1928

Left ship at 7 a.m. and went ashore, working all day getting outfit packed at Base and sent two boat loads to ship, also one derrick. Endeavouring to finish up power house and all aerial connections on mast. Gale sprang up about 5.30 p.m. and we may have to move off.

Tuesday, September 4, 1928

At 10.30 p.m. last night we were driven off shore by heavy S.W. wind came across and got under the lee of Cape Wolstenholme. Came into Erik Cove 7 a.m. and anchored. The *Larch* also had to run for shelter and anchored in cove with us. In the morning changed the water in the other boilers and filled up fresh water tanks, taking 30 tons in all. In afternoon wind moderated somewhat but dense fog at Nottingham so remained at Erik Cove for night.

Wednesday, September 5, 1928

Remained at Erik Cove, gale from southwest. Reports from Nottingham gave same weather conditions. Too rough to load boats or remain at anchor there. Dense fog at 10 a.m. and more or less all day. The same conditions all day. Anchored at Erik Cove all night.

Thursday, September 6, 1928

At anchor with Larch in Erik Cove all day. Heavy S. W. wind. No possibility of landing at Nottingham. Heavy snow fall last night.

Friday, September 7, 1928

All day at Erik Cove. Still blowing very hard from southwest. Reports from Nottingham island state that it is impossible to land boats there today.

#### Saturday, September 8, 1928

Weather against us and still too rough at Nottingham to make a landing. Had four reports during the day but always too rough. Remained at anchor at Erik Cove. Snow again last night.

#### Sunday, September 9, 1928

Left Erik Cove accompanied by Larch at 5 a.m. Nottingham at 8.40 a.m. Went ashore and sent three surf boat loads to ship with baggage, equipment and construction crew as work completed. Weather pretty rough but we were able to manage. Left the following Mr. R. S. Bunt, Officer in Charge, and Messrs. W. E. Nagle and W. J. Thomas, Operators, and Stephen Dacey, Cook. Light rain good part of day. Left Nottingham with Larch at 12.50 p.m. and proceeded east, continuing all night but slowed to half speed about dark.

#### Monday, September 10, 1928

Under way all night. About 4 a.m. changed from half to full speed. Heavy easterly wind. Ship pitching considerably. Arrived off Wakeham Bay 5.50 p.m. but it was too thick to go in so had to remain outside for the night. Weather dirty with snow flurries.

#### Tuesday, September 11, 1928

Came into Wakeham Bay at 7 a.m. and anchored. Larch and Canadian Voyageur arrived shortly afterwards. Went ashore and made arrangement to have everything possible to move now put aboard Larch. Went aboard Canadian Voyageur and arranged with Captain Macdonald to take planes, the two damaged motor boats at Base "C" and about 12 men when he is going out. Loaded lumber for Hope's Advance from Larch to Montcalm. Took aboard riggers for work at Hope's Advance and sent Sorel construction crew to Larch to remain here to help with loading. All ready to leave for Hope's Advance in morning. Transferred big motor boat carried on forward deck of Montcalm to Larch as getting dangerous to carry it in that position.

# Wednesday, September 12, 1928

Left Wakeham Bay at 4 a.m. strong westerly wind. Proceeded towards Hope's Advance, arrived there 12.35 p.m. and anchored. Too rough outside to unload boats. Sent a man across on foot and brought Mr. Wilson aboard, who reports that buildings well advanced. Lifted mooring we had left in one of the coves. Remained in shelter of Hearn island for the night.

## Thursday, September 13, 1928

Lifted anchor at 6 a.m. and moved closer to Hope's Advance to be more convenient for unloading. Went ashore with two boats of lumber for this base (clapboard) that had been buried under everything in the *Larch* and which we could not get at when here last. Discharged these boats and launch went for more but it came on a blow from the northwest and launch could not get back so was left on beach and spent night ashore. All buildings erected, some painting done, anchorages for masts completed with exception of three for jury masts. It will take at least two weeks to complete the work here. Captain King reported that he had loaded considerable equipment aboard the *Larch* at Wakeham Bay. Riggers put ashore this a.m.

### Friday, September 14, 1928

Weather fine and two boat loads were loaded and sent to the beach before 5.30 a.m. and unloaded. Weather began to get rough so I walked across to the cove at the west side of the Cape where the launch picked me up and put me

aboard the ship. In late afternoon it cleared up and wind dropped. Sent launch ashore about 5.30 p.m. with some odds and ends of equipment that were required.

## Saturday, September 15, 1928

Very fine bright day, light variable wind. Sent men ashore at 5 a.m. to fill sand bags. At 7.30 p.m. left with this sand and took it to station. The turn-buckles for radio mast sent from Ottawa are too small. They should have been  $\frac{1}{8}$ " instead of  $\frac{5}{8}$ " as received here. It was the intention to send the Larch to Nottinham for another set but later we decided it would be better and quicker to go to Wakeham, take down one of the masts there and use these turnbuckles. Arrangements were made to do this. Left Diana Bay at 6 p.m. and ran all night going west.

## Sunday, September 16, 1928

Passed tow at 2 a.m. Spent night outside. Entrance to Wakeham Bay 6.15 a.m. Put Mr. Madill and assistant ashore at observation camp. Went alongside Larch at 8 a.m. taking coal all day until 11 p.m. Sent riggers ashore at 7 a.m. and they began taking down mast, working at it all day. Equipment being packed and some of it sent aboard Larch. Two airplane wings are on board Canadian Voyageur, but loading of this equipment had to be stopped as the tug Dainty with tow and the Hopper Barge Churchill arrived to take coal from this vessel. Weather dull with light easterly wind during day, rain at night.

### Monday, September 17, 1928

Anchored Wakeham Bay, taking coal all day until 11 p.m. Mast taken down by noon. Steel moved down near beach to put aboard Larch. The Ocean Eagle with seow arrived to-day. Vessels in harbour, Montcalm, Larch, Canadian Voyageur, Ocean Eagle, Dainty, Churchill, Dredge Churchill No. 1 and scow.

# Tuesday, September 18, 1928

Moderate East wind—some fog. Began coaling again 7 a.m. Finished at 2 p.m. Took in all in fore and aft holds and bunkers 460 tons. Making 856 tons on board. Anchored at 2.30 p.m. Weather too thick to go outside at present. The power schooner *Morso* arrived during the afternoon. Sent launch for Mr. Madill and his assistant.

Vessels now in harbour—Montcalm, Larch, Canadian Voyageur, Ocean Eagle, Dainty, Churchill, Dredge Churchill No. 1, Morso and scow.

# Wednesday, September 19, 1928

Lifted anchor at 5 a.m. and proceeded towards Hopes Advance. Arrived there at 1.30 p.m. and anchored in lee of Hearn island. Strong westerly wind and too rough to land for balance of day. Remained at anchor.

# Thursday, September 20, 1928

Weather fine moderate southeast wind. At 5 a.m. sent riggers their dunnage, some equipment as well as four sticks square timber for jury masts, the cedar sticks sent especially for this are too crooked. Sent a second boat with 12 drums of gasoline taken from Wakeham. Mr. Walsh came aboard. He has been on the station since we were here before. Left Diana Bay at 11 a.m. Shaped our course for Resolution island. Icebergs have been seen drifting east every time we have been at Hope's Advance. Passed a number of these from time to time until dark. Moderated to slow during night as bergs about.

### Friday, September 21, 1928

Under way all night. Made the land about 25 miles north of Acadia Cove. Came south and anchored in Acadia cove 10.45 a.m. western entrance blocked by berg. Saw many large bergs along coast on our way south. At noon left ship in launch. Found an excellent harbour to the east of the Beacon and running north and south from strait. Followed this arm or inlet until we eventually came out in strait again in a northeasterly direction. Fresh water seems to be scarce especially near the strait. Got back to ship at 5.30 p.m. Weather fair light southeast wind. Heavy tide rip east from beacon and also south along west side of Resolution island. Remained at anchor for night in Cove.

## Saturday, September 22, 1928

Heavy southeast wind with some fog. Too rough to go around to other harbour and too thick to see from the tops of hills. Took 27 tons of water from a stream not far from ship. Weather continues too dirty all day to attempt to locate a site for D.F. station. Remained at anchor in Acadia cove for the night.

### Sunday, September 23, 1928

Heavy southeast wind in morning. Moderated in afternoon with fog all day. Divine service in morning at 10 a.m. Went ashore in afternoon and climbed several of the higher hills but could see no distance owing to fog. Taking fresh water all day until 11 p.m. Took 40 tons.

### Monday, September 24, 1928

In early morning blowing very hard with fog. Cleared about 11 a.m. Went ashore 12.30 p.m. and looked over country from tops of hills. There are a great number of lakes and fresh water is plentiful. Fog came down again about 3 p.m. so that visibility was limited. Country very rough and broken up. We now have two good harbours available, one that has been sounded, and many lakes. The next thing is to find a site which is of easy access to harbour and lake.

## Tuesday, September 25, 1928

Light southeast wind, fine. Left ship 7.30 a.m. Went ashore with Mr. Walsh and remained all day, going over a considerable area of country to the east of Resolution island beacon and to the south of Acadia Cove. Located what appears to be a fine prospect on an island east of the Beacon. There is a sufficient water supply which can be improved, the arc covered by direction finder would be satisfactory. Boats could be sent ashore from a ship anchored in the shelter of Acadia Cove. This site will have to be gone over again to-morrow. Got first signals from station at Cape Hope's Advance this evening.

# Wednesday, September 26, 1928

Went ashore 8 a.m. and looked over site again. Am satisfied it is the best we can do here. Bearings from 95 deg. to 305 deg. or an arc of 210 deg. Water supply is sufficient and can be improved. There is a small L shaped pond and dwelling could be placed close to the north end of this, storehouse on west side. Power House would be 400 feet south of this point. An aerial tramway will have to be set up to handle material and equipment to site. Tractors cannot be used as the draws are very soft yellow clay. Materials will have to be transported 1,200 to 1,400 feet, from small cove at north end. At 11 a.m. wind increased to gale from north east with thick snow, changing to rain and in afternoon could do nothing. Very dirty weather. Took two boats fresh water in morning.

Thursday, September 27, 1928

Heavy gale from south and thick outside. Too dirty to proceed to Port Burwell. In afternoon weather cleared a little. Had photos taken of D.F. site at Resolution. Took two boats of fresh water. Made report to Department regarding site.

Friday, September 28, 1928.

Weather calm, very heavy roll due to gale yesterday and strong currents in strait. Left Acadia Cove 5.45 a.m. going toward Port Burwell. Arrived there at 12.15 p.m. Went ashore to Base and found that equipment, etc. to be shipped out is pretty well all packed. Went to Hudson's Bay Company and made arrangements with Mr. Ford, Post Manager, in regard to transfer of certain equipment that his company is buying. Went aboard Canadian Raider for a few minutes. There is a wrecking crew working to bring her out. Captains Cole and Davis of Merritt-Chapman and Captain Gaudy of the Canadian National Steamships, also Captain Bennett came on board in the evening for a visit.

Saturday, September 29, 1928.

Left Port Burwell 5.45 a.m. proceeding towards Cape Hope's Advance. Weather fine, moderate southwest wind. Passing quite a number of bergs, some quite large. Under way all day. At 7 p.m. after dark weather came down thick and had to moderate to dead slow as it was unsafe to run in for the anchorage at Hope's Advance. About 11 p.m. moon came up and weather cleared. Proceeded again full speed. Anchored in Diana Bay, lee of Hearn island at 12.45 a.m. A light was put up the wireless mast which was a great help to us in making harbour.

Sunday, September 30, 1928.

Anchored in Diana Bay all day. Strong southwest wind and too rough to make landing in front of station or in cove on west end of Cape. The *Larch* arrived from Wakeham about 4.30 p.m. with the shortwave set for this station and anchored near us in the lee of Hearn island.

Monday, October 1, 1928.

Strong northwest wind—cloudy. Anchored Diana Bay all day. Too rough to land boats. Nothing to do but wait for wind to moderate. Got Mr. Walsh ashore at cove and he went across country to station. Wind increased if anything in the afternoon.

Tuesday, October 2, 1928.

Weather moderated during night. At 5 a.m. sent boat load ashore to make sure weather suitable. At 6.30 a.m. shifted our position opposite to cove on west side of Cape. Took scow and two boat loads ashore. This included the shortwave set, operators and their baggage as well as some living quarters equipment from Wakeham Bay. Finished only at 7 p.m. after dark as tide did not suit for unloading. Left Diana Bay at 8.30 p.m. going towards Wakeham Bay.

Wednesday, October 3, 1928.

Easterly wind with fog after 7 a.m. Arrived off Wakeham Bay during night and had to wait for daylight to go in, anchored at 7.30 a.m. Busy all day transferring personnel, baggage and equipment from Base to ships and arranging for sale of supplies, surplus materials, etc. to Hudson's Bay Company.

Personnel taken on board C.G.S. Montcalm.

Flight Lieut. A. A. Leitch, Sgt. Major J. Pearson, Flight Sgt. Ramsden, Sgt. Keighley, Corporal Kirkcaldy, Corporal Riggs.

Captain A. A. King, Storekeeper R. Lemieux, Cook E. Dorey, Constable

James Murray, R.C.M.P.

Personnel transferred to Canadian Voyageur.

Flying Officer B. G. Carr-Harris, Sgt. Caggie, Corporal Chambers, and Corporal Bulteel. These men are to look after the two planes we are sending out on this ship.

#### Thursday, October 4, 1928.

Anchored in Wakeham Bay—easterly wind and fog. All day packing up at Base and sending equipment aboard. Made very good progress and hope to finish to-morrow and get away. Took 40 tons of fresh water.

### Friday, October 5, 1928.

Strong easterly wind—fog. All morning sending equipment aboard including tractor, arranging for watchman who is to be Mr. Pearson of the Revillon Freres. Settling receipts with Mr. Watt of Hudson's Bay Company for materials, etc. he took over from us. In the afternoon too thick to leave for Hope's Advance. Took native family and dogs aboard. They are to go to Cape Hope's Advance Radio station.

#### Saturday, October 6, 1928.

Gale of easterly wind (off shore) with fog. Too dirty to leave for Hope's Advance. Went ashore and cleaned up around buildings and made sure everything was in good order. Same weather throughout the strait. About 5 p.m. weather cleared and wind shifted to southwest. Should be able to leave in the morning.

# Sunday, October 7, 1928.

Moderate east wind. Left Wakeham Bay 6 a.m. for Cape Hope's Advance. Arrived there 1.40 p.m. and anchored. Divine service held in the saloon at 10 a.m. In the afternoon sent three loaded boats ashore including Eskimo family for this station. Transferred Captain King, Constable Murray and Cook Dorey to the *Larch*. Finished about 7 p.m.

# Monday, October 8, 1928.

The construction crew which was moved back to Larch yesterday was taken ashore in the morning to generally clean up around the station. The tractor we brought from Wakeham was transferred to Larch. Calibrating of the station was carried out from 1 p.m. until 4.30 p.m. A broken tractor with some rough lumber was brought from the shore to the Larch. This station is completed except for a checkup in calibration. There is a small berg quite near us grounded in the entrance to Diana Bay in 25 fathoms of water.

# Tuesday, October 9, 1928.

Weather fine—moderate east wind. At 9.15 a.m. lifted anchor and went outside. Began a check up of yesterday's calibration. Completed this and returned to Diana Bay at 3.30 p.m. Mr. Walsh only got back to ship at 7

p.m. after finishing his calibration curves. By this time it was blowing hard from east and weather thick and unfit to leave for Port Burwell. Remained at anchor for the night.

This D.F. station at Hope's Advance was built in 74 days from the time

the first boat was unloaded until the calibrating was finished to-day.

#### Wednesday, October 10, 1928.

Strong easterly wind with fog in morning. Too dirty to leave. Transferred 50 tons of coal from forehold to bunkers. In afternoon it cleared a little and wind moderated. Left Diana Bay 4.10 p.m. followed by the *Larch* and proceeded towards Port Burwell. Continued on course all night.

### Thursday, October 11, 1928

Weather thick, light easterly wind. Under way all night running slow part of time. Arrived at Port Burwell at 9.10 a.m. The *Larch* arrived two hours later. At one p.m. went alongside and began taking coal. Saw Mr. Ford of Hudson's Bay Company and he has taken over for his company one hangar, all lumber, practically all the provisions, gasoline and coal oil.

#### Friday, October 12, 1928

Anchored at Port Burwell. Light northwest wind thick snow. All day taking coal from the *Larch*, and also last night. Went ashore in the morning to the Base and arranged with Dr. Kelly about unloading provisions, shifting coal and generally clearing up the station. Cod are very plentiful around here. They come in about the first week in August and leave just before the freeze up. They are not to be found at Resolution or Hope's Advance or further west in the Strait.

## Saturday, October 13, 1928

Continued coaling until 11 a.m. when we finished, having taken in all 465 tons. Went ashore at 7.30 a.m. with a gang of men. Shifted coal from beach to quarters, lifted part of slipway, took up slack in stays of radio masts, and partly took down one derrick. Ocean Eagle arrived this afternoon. Moderate easterly wind—cloudy.

# Sunday, October 14, 1928

Strong northeast wind. Cloudy—snow on the ground. Working ashore all day. Finished dismantling derrick. Finished taking up slipway. Completed moving coal up beside dwelling and power house. Sent one boat load of provisions ashore and placed it all under cover in dwelling. Sent one scow load to Larch from beyond the "bar" consisting of tractor, trolley for slipway and some of the rails, also one boat with empty drums. The Dainty arrived about 5.30 p.m.

# Monday, October 15, 1928

Moderate northeast wind, cloudy, a little snow. All day sending supplies to the station and taking surplus equipment to the *Larch*. Cleared up everything from the hangars including derrick and fittings, steel rails, etc. Moved 20 drums of gasoline to Mission. Brought 3 boat loads of coal, and one of provisions to

Mission. Sent off two boat loads with empty drums. Shifted 20 drums of gasoline up the hill to the Power House. The *Canadian Raider* was taken out of the Hudson's Bay Company's cove to-day about 10 a.m. and left for Halifax in charge of tugs *Ocean Eagle* and *Dainty* at 1 p.m.

#### Tuesday, October 16, 1928

Strong northwest wind—cloudy—cool. Sent a scow load and a half and two boat loads of equipment to the *Larch*. Took off from her three boat loads of coal and three of provisions. Shifted provisions into Mission building. In evening signing time sheets and writing letters to Department to go out on the *Larch*. Seow and motor boat to be put aboard this ship in the morning.

#### Wednesday, October 17, 1928

Moderate northwest wind—cloudy—some snow flurries. All morning settling up affairs at Base "A", taking off baggage and personnel. Put launch and scow aboard Larch. Taking fresh water from shore for Montcalm in case stream freezing up. The Larch left at 2 p.m. for Halifax with the following on board—MacMillan construction crew, three riggers, Construction Foreman Eisnor, and Dr. W. E. Kelly, Storekeeper A. S. Fuller, Captain A. A. King, Constable James Murray, R.C.M.P., Cooks E. Dorey and E. B. Congdon, of the personnel of the Hudson Strait Expedition.

#### Thursday, October 18, 1928

Strong northwest wind—cloudy—frequent snow squalls. Working ashore at station all day. Making inventories and generally cleaning up. Moved 29 tons of coal from beach to dwelling.

# Friday, October 19, 1928

Light northwest wind with numerous snow flurries. All day cleaning up at station. Finished shifting coal to dwellings. Took six drums of gasoline ashore and up to Power House. Put double windows on buildings. Brought Delco engine aboard, had it overhauled and taken ashore again and re-installed.

# Saturday, October 20, 1928

Moderate northwest wind—cloudy—snow flurries.

All day working at station. Took down Delco engine and set it up again with rubber and lead washers under it to take the vibration. It is working well now. Sent boat load of equipment on board. Closed up the hangar as well as possible to make it weatherproof and keep wind from getting under it.

# Sunday, October 21, 1928

Light southwest wind—snowflurries.

At anchor at Port Burwell. Divine Service held in the Dining Saloon at 10 a.m.

# Monday, October 22, 1928

Light northerly wind—some snow flurries.

Working at station all day. Closed pipe holes in chimneys not in use. Put board to stop wind getting under power house. Took provisions, bedding and 78725—51

coal, to observation hut. Lifted mooring buoy and sent small load barrack equipment on board. A fair sized berg has been aground at entrance to harbour since a couple of days after our arrival here.

### Tuesday, October 23, 1928

Light easterly wind-bright.

Anchored at Port Burwell all day. All work at station finished and all arrangements made with Hudson's Bay Company about material and equipment they are taking over from us. Reported to Ottawa that work finished and awaiting orders.

Constable S. R. Montague, R.C.M.P., attached to Base "A" came on board

to-day. He will return with us to Quebec.

## Wednesday, October 24, 1928

Light northeasterly wind—fine.

Left Port Burwell 7.30 a.m. and proceeded towards Button islands. The work at the station being completed and as this is not a good harbour it was decided to shift to the Button islands where there is good shelter at all times and also good observations can be taken in the strait which cannot be done at Port Burwell. Arrived at Button islands anchorage at 10.45 a.m. Had instructions to-day to remain in strait observing conditions as long as it is safe. At anchor balance of day.

#### Thursday, October 25, 1928

Light northwest wind—cloudy.

Anchored Button island anchorage all day. Shifting coal from holds to bunkers. In afternoon took launch and found a place to get fresh water.

# Friday, October 26, 1928

Moderate northwest wind—fine and cold.

Shifting coal from holds to bunkers all day. Packing up some of equipment and preparing part of report.

# Saturday, October 27, 1928

Moderate westerly wind—cloudy.

Shifting coal from holds to bunkers which was finished at noon. Weather variable, bright at times and with occasional snow flurries. Packing up some equipment and preparing part of report.

# Sunday, October 28, 1928

Light variable winds—fine, bright.

A general Divine service was held in the dining saloon at 10 a.m. followed by a service for the Roman Catholics. In the evening a program of hymns and sacred music was carried out.

# Monday, October 29, 1928

At anchor at Button islands. Light southeast wind with some snow all morning. Fine and bright in afternoon. Milder. Preparing part of report.

### Tuesday, October 30, 1928

Heavy southeast wind with snow most of day. Preparing part of report. In the evening a very successful concert with Mr. O'Malley as chairman was given in the saloon by various members of the expedition and crew of the *Montcalm*.

### Wednesday, October 31, 1928

Strong northwest wind. Snow good part of day. Anchored in Minto anchorage, Button islands, all day. No ice reported from Nottingham and only a little river ice at Churchill.

### Thursday, November 1, 1928

Strong southwest wind, cloudy. Water temperature 33 deg. Air about 28 deg. all day. Anchored in Button islands anchorage all day. No ice reported yet.

# Friday, November 2, 1928

Moderate southwest wind most of day. Water temp. 31 deg., air 32 deg. No ice reported from the westward. This water temperature after a very heavy fall of snow.

### Saturday, November 3, 1928

Moderate southwest wind. Cloudy. At anchor all day. Water temperature 32.5 deg., air 33 deg. Churchill harbour reported full of ice. No ice at Nottingham islands.

# Sunday, November 4, 1928

Heavy northeast wind. Cloudy. Anchored at Button islands. Churchill harbour reported full of ice. Divine service was held in the Saloon at 10 a.m.

# Monday, November 5, 1928

Heavy easterly gale—thick snow. Water 33 deg. Air 35 deg. Churchill harbour reported to be shut in by ice. None at Nottingham or Burwell. Received instructions to proceed to Quebec.

# Tuesday, November 6, 1928

Button islands. Northeast gale all day. Temp. 10 p.m., 42 deg. Remained at anchorage all day as it was blowing too hard to start for the south. Packed more boxes.

# Wednesday, November 7, 1928

Heavy northeast wind—thick fog. Moderating somewhat in afternoon. Water 33 deg., air 32 to 38 deg. Ready to leave but weather still too rough. Shifting coal from holds to bunkers. No ice reported in strait.

# Thursday, November 8, 1928

Strong northeast wind—rain, light fog. Lifted anchor at 7.30 a.m. and proceeded towards strait. Heavy northeast wind all day. Pretty rough but continued steadily on our course towards Quebec. Position at noon approx. 60 deg. 42 min. North lat. and 63 deg. 33 min. West long. Running all night. Everyone more or less sea-sick.

### Friday, November 9, 1928

Strong northeast wind. Clear all day. Much the same as yesterday, but not quite so rough. All day and all night under way. Position at noon 57 deg. 56 min. North lat., and 58 deg. 15 min. West longitude.

### Saturday, November 10, 1928

Strong northwest wind. Cloudy. Weather moderated considerably on our way all night and day. At 11.15 p.m. Belle Isle east light abeam. Position at noon 53 deg. 20 min. north lat. and 55 deg. 00 min. West long. All personnel feeling better though still quite a roll on.

### Sunday, November 11, 1928

Light northwest wind, fine and bright. Under way all night. Greenly island light abeam 7 a.m. Passed C.P.O.S. *Montclare* about 10 a.m. Divine service was held in the Saloon at 10.30 a.m. Position at noon 50 deg. 47 min. north lat. and 58 deg. 07 min. West long. Steadily on course all day. Weather very fine.

# Monday, November 12, 1928

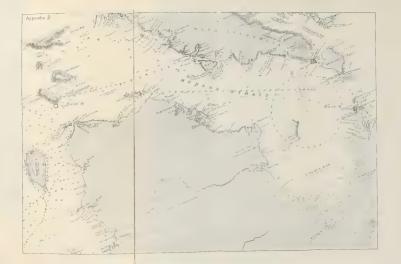
Light northwest wind—fine and bright all day. Under way all night. At 9 a.m. North Point Anticosti island abeam. Position at noon 50 miles east of Carousel light. Weather continued very fine. Packing and getting outfit ready to be put ashore.

# Tuesday, November 13, 1928

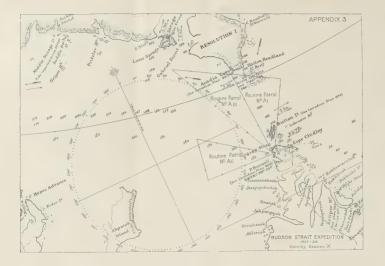
Light westerly wind—cloudy. Under way all night. Came ahead steadily all day. Arrived at Grosse Isle at 4.30 p.m. and anchored for the night as we wanted to take fresh water, clean up boilers and not arrive at Quebec at night.

# Wednesday, November 14, 1928

Left Grosse Isle at 6.45 a.m. coming up. Arrived Quebec 8.25 a.m. Got a rather noisy welcome from shipping in the river and harbour. Tied up at King's wharf and began unloading equipment.









WAKEHAM BAY, P.Q., October 11, 1927.

To Officer in Charge "A" Base, Hudson Strait Expedition.

From Officer in Charge Air Operations, Hudson Strait Expedition.

# ROUTINE PATROLS, BASE "A"

1. Attached hereto chart of vicinity of Port Burwell, Hudson Strait, outlining the routine patrols which are to be carried out from Base "A".

2. The following sequence of patrols is to be adhered to in the making of flights: A1, A2, A3; A1, A2, A3, and so on when conditions for flying over the

respective areas permit.

3. Conditions permitting, two patrols are to be carried out daily over the operational period which is to commence as soon as you have two machines ready for flying and continue until you receive further instructions re their cessation. However until your second machine is ready for flying you are to carry out patrols with one aircraft confining the area covered to a distance not more than twenty miles from your base.

4. Should adverse weather conditions make the carrying out of photographic patrols impractical and yet flying be possible, these routine patrols are to be carried on and reconnaissance reports of a very complete nature made.

5. Photographic exposures made are to be pin-pointed as per the instructions given in "Air Force Instructions" of July 11, 1927, of which you are already in possession.

6. Film exposed is to be developed as soon after exposure as possible and

duplicate prints filed.

7. The general progress made in the execution of the above patrols is to be forwarded to Headquarters Base "C" daily.

8. When all three bases are fully organized for flying, special patrols east from Nottingham, east and west from Wakeham Bay and west from Burwell will be arranged. You will receive further instructions in this respect at a later date.

(Sgd.) T. A. LAWRENCE,

Officer in Charge Air Operations,

Hudson Strait Expedition.

(Sgd.) N. B. McLEAN,
Officer in Charge,
Hudson Strait Expedition.

WAKEHAM BAY, P.Q., October 11, 1927.

To N. B. McLean, Officer in Charge, Hudson Strait Expedition.

From T. A. LAWRENCE,
Officer in Charge Air Operations,
Hudson Strait Expedition.

# ROUTINE PATROLS, BASE "C"

- 1. The following recommendations are passed herewith in connection with routine patrols from this base.
- (a) That there will be four routine patrols as outlined on the attached map.
- (b) That two of these patrols be carried daily when weather conditions permit and as soon as two machines are in service. In the meantime patrols will be carried out by one machine under instructions not to proceed any further than thirty miles in any one direction from the base.
- (c) That if weather conditions are not fit for photography and yet fit for flying the patrols be carried on with and a detailed reconnaissance report be completed after each flight.
- (d) That as soon after each patrol as possible, exposed films be developed and printed, duplicate prints of each exposure being filed.
- (e) That the sequence in which these patrols be carried out be C1, C2, C3, C4, alternately.
- (f) That all photographs taken be pin-pointed in accordance with "Air Force Instructions" of July 11, 1927.

(Sgd.) T. A. LAWRENCE,

Squadron Leader, R.C.A.F.,

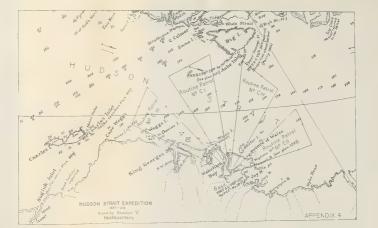
Officer in Charge Air Operations,

Hudson Strait Expedition.

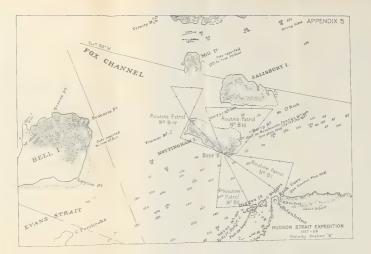
(Sgd.) N. B. McLEAN,

Officer in Charge,

Hudson Strait Expedition,









C.G.S. STANLEY, August 18, 1927.

Officer in Charge "B" Base, Hudson Straits Expedition.

om Officer in Charge, Hudson Straits Expedition.

### ROUTINE PATROLS "B" BASE

- 1. Attached hereto chart of vicinity of Nottingham Island, Hudson Straits, tlining the routine patrols which are to be carried out from "B" Base.
- 2. The following sequence of patrols is to be adhered to in making flights: 1, B2, B3, B1, B2, B4, B1, B2, B3, B1, B2, B4, etc., when conditions for flying rer the respective areas permit.
- 3. Conditions permitting, two patrols are to be carried out daily over the perational period which is to be commenced as soon as you are in a position to art operations and will continue until further notification is received from adquarters Base "C".
- 4. Should adverse weather conditions make the carrying out of photographic atrols impracticable and yet flying conditions practicable, these routine patrols re to be carried on and reconnaissance reports of a very complete nature made.
- 5. Photographic exposures made are to be pin-pointed as per the instructions iven in "Air Force Instructions" of July 11, 1927, of which you are already in possession.
- 6. Film exposed is to be developed as soon after being made as is possible and duplicate prints filed.
- 7. The general progress made in the execution of the above patrols is to be orwarded to Headquarters Base "C" daily.

(Sgd.) T. A. LAWRENCE,

Officer in Charge Air Operations,

Hudson Straits Expedition.

Concur (Sgd.) N. B. McLean,

Officer in Charge,

Hudson Straits Expedition.

WAKEHAM BAY, F.Q., October 11, 1927.

To N. B. McLean, Officer in Charge, Hudson Straits Expedition.

From T. A. LAWRENCE,
Officer in Charge Air Operations,
Hudson Straits Expedition.

# ROUTINE AND SPECIAL PATROLS ALL BASES, H.S.E. 1927-28

1. Attached hereto for your retention are the following in respect to aerial patrols, Hudson Straits Expedition:—

Appendix (A)—Routine patrols and instructions, Base "C".
(B)—Routine patrols and instructions, Base "B".
(C)—Routine patrols and instructions, Base "A".

" (D)—A chart showing special patrols for all three bases.

- 2. In connection with the last mentioned it is not proposed to carry out any of these patrols until such time as all three bases are fully organized for flying and all wireless communication base to base and air to ground in regular operation.
- 3. These special patrols to be carried out under special arrangements when conditions permit, one machine carrying out patrol No. 1 at the same time another machine from Base "A" carries out patrol No. 2, and a similar system for patrols Nos. 3 and 4 between "C" and "B". No more than two machines will be actually in the air at one time.

# (Sgd.) T. A. LAWRENCE,

Officer in Charge Air Operations, Hudson Straits Expedition.

(Sgd.) N. B. McLEAN,





METEOROLOGICAL OBSERVATIONS AS TAKEN FROM LOG OF C.G.S. "STANLEY" VOYAGE FROM HALIFAX, N.S., TO HUDSON STRAIT AND RETURN TO QUEBEC

D	ate	Time	Barome- ter	Ther- mometer	Direction of Wind	Weather	Position
July	17.	4 a.m.	29.48		ESE.	Light breeze—clear	TT 1:0 1
0 (11)	A	12 noon	29.50		Calm	Dense fog	Halifax harbour.
		8 p.m.	29.54		ESE.	Dense fog	Off Nova Scotia
	18	4 a.m.	29.40		ESE.	Moderate breeze.	coast.
		12 noon	29.48		S.	Moderate breeze.	
	19	8 p.m. 4 a.m.	29.50 $29.58$		S. ENE.	Moderate breeze—cloudy. Light breeze—clear	Amminus I Cond.
		12 noon	30.04		NE.	Light breeze—dense fog.	Arrived Sydney 1.45 a.m., left 9.20
		8 p.m.	30.06		NE.	Light breeze—dense fog.	a.m.
							Lat. 46° 39′ N.
	20	4 a.m.	30.28		SSE.	Light breeze—foggy	Long. 60° 08' W. Lat. 49° 41' N.
		12 noon 8 p.m.	$   \begin{array}{c c}     30 \cdot 26 \\     30 \cdot 26   \end{array} $		SSE. SSW.	Light breeze—foggy. Light breeze—rain—foggy.	Long. 58° 28′ W.
	21	4 a.m.	30.34		NE.	Moderate wind and rain.	
		12 noon 8 p.m.	$30.34 \\ 30.50$		NE.	Moderate wind and rain	Forteau hay.
		o p.m.	90.00	* *	E.	Light wind	In Straits of Belle Isle.
	22	4 a.m.	20.50		N.	Light wind—clear	Lat. 53° 05′ N. Long. 55° 31′ W.
		12 noon 8 p.m.	30·51 30·30		N. N.	Light wind—clear. Moderate wind—overcast.	Long. 55° 31′ W.
	23	4 a.m.	29.86		W.	Moderate wind—overcast	Lat. 55° 24′ N.
		12 noon	29·86 29·98		N.	Moderate wind—overcast.	Long. 58° 30′ W.
	24	8 p.m. 4 a.m.	29.96		N. N.	Fresh wind—rain. Light wind—thick fog	Lat. 57° 02′ N.
		12 noon	29.96		N.	Light wind—thick fog.	Long. 60° 30' W.
	25	8 p.m. 4 a.m.	29·83 29·88		W. NNE.	Gentle breeze and clearing.	Lat. 59° 27′ N.
		12 noon	29.88		NNE.	Light wind—cloudyLight wind—cloudy. Light wind—dense fog.	Long. 62° 31′ W.
	26	8 p.m. 4 a.m.	$ \begin{array}{c c} 29.84 \\ 29.90 \end{array} $		NE.	Light wind—dense fog.	
	20	12 noon	29.90		NNE.	Light wind—dense fog. Light wind—dense fog.	
	077	8 p.m.	29.80		Calm	Fine and clearLight wind—fine and clear	Off Cape Chidley.
	27	4 a.m. 12 noon	29·98 29·98		NW. NW.	Light wind—fine and clear Light wind—fine and clear.	Arrived Port Burwell 5 p.m.
		8 p.m.	29.89		Calm	Fine and clear.	Durwell o p.m.
	28	4 a.m. 12 noon	29.87 $29.70$		SW.	Light wind—clear	
		8 p.m.	29.64		W.	Light wind—clear. Light wind—overcast.	6 a.m. Lat. 60° 47′ N.
	29		00.40				Long. 66° 00′ W. Lat. 62° 07′ N.
	29	4 a.m. 12 noon	29·46 29·46		SSW. SSW.	Light wind—cloudyLight wind—cloudy.	Lat. 62° 07′ N. Long. 70° 00′ W.
		8 p.m.	29.38		W.	Light wind—cloudy. Light wind—overcast.	Long. 70 00 44.
	30	4 a.m.	29.42		Calm Calm	Foggy.	Lat. 62° 45′ N.
		8 p.m.	29.38		Calm	Rain.	Long. 73° 05′ W.
	31	4 a.m.	29.38		W.	Strong wind-foggy.	
		12 neon 8 p.m.	29·38 29·36		11.0.11.	Strong wind—foggy	Lat. 63° 07′ N. Long. 77° 30′ W.
Aug.	1	4 a.m.	29.66		wsw.	Fresh wind—foggy. Strong wind—cloudy	Arrived Erik Cove
		12 noon	29.66		WSW.	Strong wind—cloudy.	5.£0 a.m.
	2	8 p.m. 4 a.m.	29·63 29·49		WSW. SE.	Fresh wind—squally. Light wind—passing fog	Left Erik Cove 3
		12 noon	29.49		SE.	Light wind—cloudy.	a.m., arrived Port
		8 p.m.	29 · 42		SE.	Light wind—passing fog.	de Boucherville 8.30 a.m.
							Anchored.
	3,.	4 a.m. 12 noon	29·40 29·42		E.		Left Port de Bou-
		8 p.m.	29.42			Moderate breeze—cloudy. Moderate breeze.	cherville 10 a.m., anchored opposite
						National Parket	Nottingham
	1		1		1		Island light.

# METEOROLOGICAL OBSERVATIONS AS TAKEN FROM LOG OF C.G.S. "STANLEY" VOYAGE FROM HALIFAX, N.S., TO HUDSON STRAIT AND RETURN TO QUEBEC—Continued

Date	Time	Barome-	Ther- mometer	Direction of Wind	Weather	Position
Aug. 4	4 a.m.	29.48		ESE.	Strong breeze—cloudy.	
	12 noon			SE.	Moderate breeze—clear.	
	8 p.m.	29.70		ESE.	Moderate breeze—clear.	
5	4 a.m.	29.66		ESE.	Moderate breeze—cloudy.	
	12 noon	29.69		E.	Moderate breeze—clear.	
	8 p.m.	29.66		SE.	Moderate breeze—rain.	
6	4 a.m.	29.60		ESE.	Light breeze—clear.	
	12 noon	29.62		ESE. WSW.	Moderate brooze—clear	
	8 p.m.	29.62		WSW.	Light breeze—overcast.	
7	4 a.m.	29.58		ESE.	Light breeze—overcast.	
	12 noon	29.64		SE.	Light breeze—clear.	
	8 p.m.	29.70		SSW.	Light breeze—overcast. Light breeze—overcast. Light breeze—lear. Light breeze—fog. Light breeze—dense fog. Light breeze—clear.	
8	4 a.m.	29.71		WSW.	Light breeze—dense tog.	
	12 noon	29.80		SW.	Light breeze—clear.	
	8 p.m.	29.72		E. ENE.	Moderate breeze—clear. Moderate breeze—foggy—rain.	
9	4 a.m.	29.50		ENE.	Moderate breeze—loggy—rain.	
	12 noon	29.58		ESE.	Light breeze—cloudy. Light breeze—overcast—rain.	
	8 p.m.	29.46		WSW.	Light breeze—overcast—rain.	
10	4 5	29.58		wsw.	9.30 p.m. Light breeze—dense fog	
10	4 a.m. 12 noon			WSW.	Light breeze—dense log Light breeze—clear.	
	2 n m	29.30		WSW.	Light breeze—hazy.	
11	8 p.m. 4 a.m.	30.10		S.	Light breeze—dense fog,	
11	4 a.m.	90.10		ν.	cleared 5 a.m.	
	12 noon	30.10		S.	Light breeze—clear.	
	8 p.m.	30.18		SSE.	Light breeze—cloudy.	
12	4 a.m.	30.24		SE. by E.	Light breeze—clear.	
1	12 noon			ESE.	Moderate breeze—clear.	
	8 p.m.			SE.	Moderate breeze—clear.	
13	4 a.m.	30.31		E.	Strong breeze—clear.	
	12 noon			ESE.	Strong breeze—clear.	
	8 p.m.			ESE.	Strong breeze—clear.	
14	4 a.m.	30.46		E.	Light breeze—clear.	
	12 noon			SE.	Light breeze—clear.	
	8 p.m.			SE.	Light breeze—clear.	
15	4 a.m.	30.54		WNW.	Light breeze—clear.	
	12 noon			W.	Light breeze—clear.	
	8 p.m.	30.64		W.	Light breeze—clear.	
16	4 a.m.	30.60		SE.	Light breeze—clear.	
	12 noon	30.60		W. NNE. NNW. SSW.	Light breeze—clear.	
	8 p.m.	30.52		NNE.	Light breeze—clear.	
17.	4 a.m.	30.32		NNW.	Light breeze—clear.	
	12 noon			SSW.	Light breeze—clear.	
10	8 p.m.	30.12		SW.	Light breeze—clear. Light breeze—clear.	T 4: 37 ::: 1
18	4 a.m.	30.03		SSW.	Light breeze—clear	Left Nottingham
	12 noon			SSE.	Light breeze—clear. Light breeze—clear. Light breeze—cloudy	0.30 p.m.
19	8 p.m. 4 a.m.			SSE.	Light breeze—clear.	Amirrod Asho Inla
19	12 noon	29.74		S.	Moderate brooms aloudy	5 n m
	8 p.m.			S.	Moderate breeze—cloudy. Moderate breeze—cloudy.	5 p.m.
20	4 a.m.			SE.	Strong brooms forgy	
20	12 noon	29.68		SSE.	Strong breeze—foggy. Strong breeze—cloudy. Strong breeze—cloudy.	
	8 p.m.			ESE.	Strong breeze—cloudy.	
21	4 a.m.			SSE.	Strong breeze—rain	Left Ashe Inlet
	12 noon			SE.	Moderate breeze—overcast.	a.m., arrived Lal
	8 p.m.			NW.	Light breeze—overcast.	Harbour 5 p.m.
22	4 a.m.			NNW.	Light breeze—foggy.	Later Sour o print
	12 noon	29.84		WNW.	Light breeze—cloudy.	
	8 p.m.	29.82		SE.	Light breeze—clear.	
23	4 a.m.	29.71		N.	Light breeze—clear	Left Lake Harbo
	12 noon	29.74		N.	Moderate breeze—clear.	3 p.m.
	8 p.m.	29.76		NW.	Moderate breeze—clear.	
24	4 a.m.	29.72		NW.	Light breeze—clear	Arrived Wakeham
	12 noon	29.92		NW.	Light breeze—clear.	Bay 7 a.m.
	8 p.m.	29.91		ENE.	Light breeze-cloudy.	
25	4 a.m.	30.00		NNW.	Light breeze—clear	
	12 noon			ENE.	Light breeze—overcast.	
	8 p.m.	30.02		NNW.	Light breeze—overcast.	1

# METEOROLOGICAL OBSERVATIONS AS TAKEN FROM LOG OF C.G.S. "STANLEY" VOYAGE FROM HALIFAX, N.S., TO HUDSON STRAIT AND RETURN TO QUEBEC—Continued

	1						
Da	.te	Time	Barome-	Ther-	Direction of Wind	Weather	Position
			ter	mometer	Willia		
	00	4	00.04		SE.	Light breeze—overcast.	
Aug.	26	4 a.m. 12 noon	$29.94 \\ 29.80$		WNW.	Light breeze—clear.	
		8 p.m.	29.70		NW.	Strong breeze—smoky.	
	27	4 a.m.	29.81		NW.	Strong breeze—smoky.	
		12 noon	$29 \cdot 82$		wsw.	Light breeze—clear.	
		8 p.m.	30.01		N.	Strong breeze—clear.	
	28	4 a.m.	30.04		NW. WSW.	Strong breeze—clear. Light breeze—clear.	
		12 noon	$30.22 \\ 30.08$		SSW.	Moderate breeze—clear.	
	29	8 p.m. 4 a.m.	29.94		s.	Light breeze—cloudy.	
	20	12 noon	29.72		NNW.	Light breeze—overcast.	
		8 p.m.	$29 \cdot 74$		NW.	Light breeze—cloudy.	
	30	4 a.m.	29.50		NE.	Strong breeze cloudy.	
		12 noon	29.98		ENE.	Strong breeze—cloudy. Strong breeze—clear.	
	01	8 p.m.	30.10		NE. N.	Strong breeze—cloudy.	
	31	4 a.m. 12 noon	$30 \cdot 14 \\ 30 \cdot 20$		N.	Strong breeze—clear.	
		8 p.m.	30.27		SSE.	Moderate breeze—overcast.	
Sept.	1	4 a.m.	30.14		SW.	Moderate breeze—cloudy.	
-cp-t-		12 noon	29.82		SE.	Moderate breeze—clear.	
		8 p.m.			WNW.	Moderate breeze—cloudy.	
	2	4 a.m.	29.82		Calm	Cloudy. Light breeze and clear.	
		12 noon			SW.	Light breeze—overcast.	
	3	8 p.m. 4 a.m.			SSW.	Light breeze—rain—foggy from	
	0	T a.III.	20.10			6 a.m. to 10 a.m.	
		12 noon	29.60		WSW.	Light breeze—overcast.	
		8 p.m.	29.61		wsw.	Light breeze—cloudy.	
	4	4 a.m.	29.55		ENE.	Moderate breeze—cloudy—fog	
		10	00 60		ENE.	4.30 a.m. Moderate breeze—rain.	
		12 noon		• •	NNW.	Light breeze—clear.	
	5	8 p.m. 4 a.m.			NW.	Light breeze—cloudy.	
	0	12 noon		1	NW.	Light breeze—clear.	
		8 p.m.			ENE.	Light breeze—cloudy.	
	6	4 a.m.	30.00		W.	Light breeze—clear.	
		12 noon		1	NNE.	Light breeze—fog.	
	p==	8 p.m.			NNE. ENE.	Moderate breeze—cloudy. Strong breeze—cloudy.	
	7	4 a.m. 12 noon			NE.	Moderate breeze—cloudy.	
		8 p.m.			NE.	Strong breeze—cloudy.	
	8	4 a.m.		1	NNE.	Light breeze—cloudy.	
		12 noor	30.18		SSE.	Light breeze—clear.	
		8 p.m.			ESE.	Light breeze—rain.	
	9	4 a.m			SW.	Light breeze—rair.	
		12 noor			ENE.	Light breeze—cloudy. Light breeze—cloudy.	
	10	8 p.m 4 a.m			Calm	Cloudy.	
	10	12 noor			ENE.	Moderate breeze—cloudy.	
		8 p.m	. 29.39		NE.	Moderate breeze—rain—fog.	T - 64 Wal - 1 4 4
	11	4 a.m	. 29.42		NW.	Moderate breeze—rain	Left Wakeham 4.4
		12 noor	29.46		N.	Clear—light breeze.	a.m.
	10	8 p.m			SW.	Fog—light breeze	Arrived Port
	12			• • •	SE.	Fog—moderate breeze.	Burwell 6.30 a.m
		12 noor 8 p.m			ENE.	Light breeze—rain.	
	13				WNW.	Strong breeze—fog.	
	20	12 nooi			WSW.	Light breeze—clear.	
		8 p.m	. 29.78		E.	Moderate breeze—rain.	
	14	4 a.m	. 29.84		SE.	Strong breeze—rain—fog.	
		12 noon			ESE.	Strong breeze—cloudy.	
	15	8 p.m		• •	ENE.	Strong breeze—cloudy.  Moderate breeze—cloudy.	
	15	4 a.m 12 noon			SE.	Moderate breeze—clear.	
		8 p.m			ENE.	Moderate breeze—clear.	
	16.				E.	Light wind and cloudy.	
		12 noor	n 30·12		ENE.	Light breeze—fog.	
		8 p.m			SE.	Light breeze—clear.	

# Meteorological Observations as taken from Log of C.G.S. "Stanley" Voyage from Halifax, N.S., to Hudson Strait and Return to Quebec—Continued

	lo to	Time	Barama	Ther-	Direction	Weather	Pogition
D	ate	Time	Barome- ter	mometer	of Wind	weather	Position
-							
Sept.	17	4 a.m.	30.00		S.	Light breeze—clear.	
		12 noon 8 p.m.	29.92 $29.99$	• •	SE.	Moderate breeze—clear. Moderate breeze—clear.	
	18	4 a.m.	29.98		NW.	Very little air—overcast.	
		12 noon	29.98		WSW.	Light breeze—clear.	
		8 p.m.	29.98		SW.	Light breeze—clear.	
	19	4 a.m.	29.93	• • •	SE.	Light breeze—clear.	
		12 noon 8 p.m.	$29.79 \\ 29.63$	• •	SSE.	Strong breeze—clear. Moderate breeze—cloudy.	
	20	4 a.m.	29.59		SE.	Moderate breeze—cloudy.	
		12 noon	29.62		ssw.	Light breeze—overcast.	
	0.4	8 p.m.	29.64		ENE.	Light breeze—clear.	
	21.	4 a.m. 12 noon	$   \begin{array}{c}     29 \cdot 62 \\     29 \cdot 66   \end{array} $		Calm SW.	Clear.	
		8 p.m.	29.68		Calm	Light breeze and clear.	
	22	4 a.m.	29.68		Calm	Cloudy.	
		12 noon	29.68		SSE.	Light breeze—clear.	
	02	8 p.m.	29.90		SSW.	Light breeze—cloudy.	
	23	4 a.m. 12 noon	$ \begin{array}{c c} 29.98 \\ 30.04 \end{array} $	• •	WSW. WSW.	Light breeze—cloudy.  Light breeze—clear.	·
		8 p.m.	30.06		SE.	Light breeze—cloudy.	
	24	4 a.m.	30.00		SW.	Light breeze—clear.	
		12 noon	29.86		SSE.	Light breeze—clear.	
	95	8 p.m.	$   \begin{array}{c c}     29 \cdot 94 \\     29 \cdot 61   \end{array} $		WSW.	Light breeze—clear.	
	25	4 a.m. 12 noon	$29.01 \\ 29.55$		S. WSW.	Moderate breeze—clear. Moderate breeze—overcast.	
		8 p.m.	29.60		wsw.	Moderate breeze—cloudy.	
	26	4 a.m.	29.63		NNW.	Light breeze—rain.	
		12 noon	29.73		NNW.	Light breeze—rain.	
	27	8 p.m. 4 a.m.	29·84 29·91		NW.	Light breeze—overcast.	
	21	12 noon	30.10		NNW. WNW.	Strong breeze—hail. Strong breeze—clear.	
		8 p.m.	29.82	1	WNW.	Strong gale—snow.	
	28	4 a.m.	29.68		WNW.	Strong breeze—cloudy.	
		12 noon	29.59		WNW.	Strong breeze—overcast.	
	29	8 p.m. 4 a.m.	$   \begin{array}{c c}     29.68 \\     29.82   \end{array} $	• •	WNW.	Strong breeze—cloudy. Moderate breeze—clear.	
		12 noon	29.94		NW.	Moderate breeze—clear.	
		8 p.m.	30.04		NNW.	Light breeze—clear.	
	30	4 a.m.	80.03		NW.	Moderate breeze—snow.	
		12 noon 8 p.m.	$   \begin{array}{c c}     30 \cdot 20 \\     30 \cdot 04   \end{array} $		NNW. NW.	Moderate breeze—cloudy.	
Oct.	1	4 a.m.	29.96		N.	Light breeze—cloudy. Light breeze—clear.	
		12 noon	29.90		NNW.	Moderate breeze—clear.	
		8 p.m.	29.85		NNW.	Moderate breeze—cloudy.	
	2	4 a.m. 12 noon	30.04	• • •	N.	Strong breeze—clear.	
		8 p.m.	30.10	::	N. N.	Moderate breeze—clear. Moderate breeze—clear.	
	3	4 a.m.	30.20		N.	Strong breeze—clear.	
		12 noon	30.08		N.	Moderate breeze—overcast.	
	1	8 p.m.	29.96	28	NW.	Light breeze—cloudy.	T 4: D . D
	4	4 a.m. 12 noon	$ \begin{array}{c c} 29.74 \\ 29.71 \end{array} $		SE. ESE.	Light breeze—cloudy Moderate breeze—clear.	
		8 p.m.	29.61	23	ENE.	Light breeze—clear.	5.30 a.m.
	€.	4 a.m.	29.66		NE.	Strong breeze—clear	Arrived Wakeham
		12 noon	29.95	39	N.	Moderate breeze—clear.	Bay 8 a.m.
	6	8 p.m. 4 a.m.	$   \begin{array}{c c}     29 \cdot 97 \\     30 \cdot 06   \end{array} $	30 29	N.	Moderate breeze—cloudy.	
	0	12 noon	30.10	34	N. NNE.	Light breeze—cloudy.	
		8 p.m.	30.00	30	NNE.	Light breeze—overcast. Light breeze—cloudy.	
	7	4 a.m.	30.14	30	WNW.	Light breeze—clear	Left Wakeham Bay
		12 noon	30.20	31	WNW.	Moderate breeze—clear.	6.45 a.m.
	8	8 p.m. 4 a.m.	$30.14 \\ 30.17$	34 38	NW. WSW.	Light breeze—cloudy.	American J. NT. 443
	0	12 noon	30.14	52	NNE.	Light breeze—overcast Light breeze—clear.	Arrived Notting- ham 7.30 a.m.
		8 p.m.	30.14	32		Moderate breeze—clear.	Left Nottingham
	0	4					2.20 p.m.
	9	4 a.m. 12 noon	30.28	32	SE.	Moderate breeze—clear	Arrived Wakeham
		8 p.m.	$30 \cdot 19 \\ 30 \cdot 18$	36 32		Light breeze—overcast.  Moderate breeze—clear.	10.30 a.m.
	1	O p.m.	00.10	04	747444 . 1	moderate preeze—clear.	

# METEOROLOGICAL OBSERVATIONS AS TAKEN FROM LOG OF C.G.S. "STANLEY" VOYAGE FROM HALIFAX, N.S., TO HUDSON STRAIT AND RETURN TO QUEBEC—Continued

		_		Direction		
Date	Time	Barome-	Ther-	of	Weather	Position
		ter	mometer	Wind		
0 1 10		00.10	000	BIBIE	Strong breeze—clear.	
Oct. 10.		30·10 30·10	28 34	NNE.	Moderate breeze—overcast.	
	12 noon	30.10	30	ESE.	Moderate breeze—snow.	
11.	8 p.m. 4 a.m.	30.10	36	NW.	Light wind—cloudy.	
11.	12 noon		38	sw.	Light wind—cloudy.	
	8 p.m.	30.18	36	ENE.	Light wind—snow.	
12.	4 a.m.	30.20	36	Calm	Fog (cleared 5.45 a.m.).	
1.2.	12 noon		40	NE.	Light breeze-cloudy.	
	8 p.m.	30.16	30	WNW.	Light breeze—overcast.	
13.		30.12	34	NW.	Light breeze—clear.	
	12 noon		32	ESE.	Light breeze—cloudy.	
	8 p.m.	29.73	30	ENE.	Strong breeze—heavy snow.	
14.	4 a.m.	29.48	34	ESE.	Strong breeze—snow.	
	12 noon	$29 \cdot 29$	40	NE.	Very light breeze—overcast.	
	8 p.m.	29.45	34	SE.	Light breeze—overcast.	
15.		29.43	30	WNW.	Strong breeze—overcast.	
	12 noon		32	NW.	Strong breeze—overcast.	
	8 p.m.	30.03	31	NW.	Moderate breeze—cloudy.	T C: 337 3 1
16.		30.20	26	NW.	Moderate breeze—cloudy	
	12 noon		34	NE.	Moderate breeze—cloudy.	11 a.m.
1 4 20	8 p.m.		. 32	N.	Light breeze—overcast.	Arrived at Port
17.			32	N.	Light breeze—cloudy Light breeze—clear.	Burwell 7 a.m.
	12 noon		27 31	NW. SW.	Light breeze—clear.	Durwen / a.m.
10	8 p.m.		36	S. S.	Light breeze—overcast.	
18.			41	wsw.	Light breeze—overcast.	
	12 noon 8 p.m.		36	WSW.	Moderate breeze—overcast.	
19.	4 a.m.		39	W.Sw.	Moderate breeze—cloudy.	
10.	12 noon		37	wsw.	Moderate breeze—overcast.	
	8 p.m.		36	SE.	Light breeze—cloudy.	
20.			36	ssw.	Moderate breeze—cloudy.	
20.	12 noon		39	SSE.	Strong breeze—clear.	1
	8 p.m.		24	SSE.	Strong breeze—clear.	
21.			36	SE.	Strong breeze—overcast.	
	12 noon		38	SE.	Strong breeze—clear.	
	8 p.m.	29.90	36	SE.	Strong breeze—cloudy.	
22.	. 4 a.m.	29.88	36	SE.	Strong breeze—cloudy.	
	12 noon		37	SE.	Moderate breeze—cloudy.	
	8 p.m.		35	ESE.	Moderate breeze—overcast.	
23.			34	ESE.	Light breeze—cloudy.	
	12 noon		30	E.	Moderate breeze—cloudy.	
0.4	8 p.m.		29	NE.	Moderate breeze—snow.	
24.			29	NE.	Moderate breeze—cloudy. Moderate breeze—raining.	
	12 noor		32 29	N. NNW.	Light breeze—overcast.	
25.	8 p.m.		26	NNW.	Moderate breeze—cloudy.	
40.	4 a.m.		31		Moderate breeze—snow.	
	8 p.m.		28	W. NNW.	Light breeze—cloudy.	
26.			29	NNW.	Light breeze—overcast.	
20.	12 noor		31	N.	Very light breeze—overcast.	
	8 p.m.		28	WNW.	Light breeze—overcast.	
27.			32	NW.	Light breeze—cloudy.	
	12 noor		28	NNW.	Light breeze—overcast.	
	8 p.m.		28	NNW.	Light breeze—clear.	
28.	. 4 a.m.		29	N.	Light breeze—snow.	
	12 noor		32	N.	Light breeze—overcast.	
	8 p.m.		30	NW.	Light breeze—overcast.	
29.		29.88	30	NNW.	Light breeze—cloudy.	
	12 noor	29.92	33	NW.	Light breeze—snow.	
0.0	8 p.m		30	N.	Light breeze—cloudy.	
30.			28	N.	Light breeze—clear. Moderate breeze—cloudy.	
	12 noor		31 28	N.	Clear.	
31.	8 p.m		28	Calm WNW.	Strong breeze—snow.	
51.			29	SW.	Moderate breeze—clear.	
	12 noor 8 p.m		30	S.	Moderate breeze—clear.	
Nov. 1.			29	SSE.	Moderate breeze—snow.	
1107. 1.	12 noor		34	W.	Strong breeze—rain.	
	8 p.m		30	WNW.	Strong breeze—cloudy.	
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# Meteorological Observations as taken from Log of C.G.S. "Stanley" Voyage from Halifax, N.S., to Hudson Strait and Return to Quebec—Continued

		1	1			
Date	Time	Barome- ter	Ther- mometer	Direction of Wind	Weather	Position
NTo 0	1 0 000	29.70	32	WNW.	Strong breeze—snow.	
Nov. 2	4 a.m. 12 noon		36	SW.	Light breeze—cloudy.	
	8 p.m.	28.98	43	SE	Moderate breeze—rain.	
3	4 a.m.	29 · 19	35	W. W.	Strong wind—cloudy.	
	12 noon		33	W.	Heavy gale—cloudy. Strong wind—cloudy.	
4	8 p.m.	$29.74 \\ 30.09$	33 33	W.	Strong wind—cloudy. Strong breeze—overcast.	
4	4 a.m. 12 noon	30.09	32	W. SSE.	Light breeze—clear.	
	8 p.m.		36	SSE.	Moderate breeze—cloudy.	
5	4 a.m.	29.80	50	SSE.	Moderate breeze—cloudy. Moderate breeze—clear.	
	12 noon		56	S.	Light breeze—clear.	
6	8 p.m. 4 a.m.	$29.89 \\ 30.10$	52 50	S. S.	Moderate breeze—clear.	
0	12 noon		58	sw.	Light breeze—very clear. Light breeze—clear.	
	8 p.m.	30.14	42	SSE.	Strong breeze—clear.	
7	4 a.m.	29.90	38	SSE.	Heavy wind—clear. Strong breeze—cloudy.	
	12 noon	$29.86 \\ 29.52$	40 39	SE. S.	Strong breeze—cloudy.	
8	8 p.m. 4 a.m.	29.52	37	SSW.	Heavy gale—cloudy. Moderate breeze—cloudy.	
0	12 noon	29.70	40	WSW.	Light breeze—clear.	
	8 p.m.	$29 \cdot 54$	32	WNW.	Light breeze—cloudy.	
9	4 a.m.	29.45	27	WNW.	Strong breeze—clear.	
	12 noon 8 p.m.	$29.58 \\ 29.74$	29 29	WNW. WNW.	Light breeze—clear. Light breeze—clear. Light breeze—clear. Strong breeze—cloudy. Strong breeze—cloudy. Strong breeze—overcast. Strong breeze—cloudy.	
10	4 a.m.	29.89	27	WNW.	Strong breeze—cloudy.	
	12 noon	$29 \cdot 96$	26	WNW.	moderate breeze-clear.	
4.4	8 p.m.	29.99	24	NW. NNW.	Moderate breeze—clear.	
11	4 a.m. 12 noon	$29.97 \\ 30.00$	26 25	NNW.	Strong wind—overcast Strong wind—overcast.	Left Port Burwell 9.45 a.m.
	8 p.m.	30.00	$\frac{25}{25}$	NNW.	Moderate breeze—cloudy.	9.45 a.m.
12	4 a.m.	30.06	25	NNW.	Moderate breeze—cloudy.	
	12 noon	29.84	27	WSW.	Strong breeze—cloudy.	
13	8 p.m. 4 a.m.	$29 \cdot 38 \\ 29 \cdot 26$	28 28	SSW.	Heavy gale—snow.	
10	12 noon		32	W. WNW.	Strong breeze—clear. Moderate breeze—cloudy.	
	6 p.m.	29.48	29	NW.	Strong breeze—clear.	
	_		No read	ings after	Heavy seas—heavy gale.	
14	4 0 700	29.96	27 6 p	.m.  NW.	TT1 1 1	
14	4 a.m. 12 noon	30.22	$\frac{27}{25}$	NW.	Heavy gale—clear. Strong breeze—clear.	
	8 p.m.	30.12	27	WNW.	Strong breeze—cloudy	Anchored upper end
	_					Nigger cove.
15	4 a.m. 12 noon	29.96	$\frac{32}{25}$	WNW.	Strong breeze—clear.	
	8 p.m.	$30 \cdot 14 \\ 30 \cdot 39$	23 18	NW.	Strong breeze—clear. Light breeze—clear.	
16	4 a.m.	30.40	16	NW.	Moderate breeze—clear.	
	12 noon	30.28	23	NW.	Moderate breeze—overcast.	
17	8 p.m. 4 a.m.	$30.28 \\ 30.39$	24 20	NW.	Light breeze—overcast.	T C NT
IT.	12 noon	30.39	29	W.	Moderate breeze—clear	Left Nigger cove
	8 p.m.	30.19	31	ESE.	Moderate breeze—snow. Strong breeze—snow.	Anchored at Forteau
10	4 -		0.0	T	,	bay.
18	4 a.m. 12 noon	$   \begin{array}{c c}     30 \cdot 02 \\     29 \cdot 74   \end{array} $	$\frac{32}{34}$	E. E.	Strong breeze—rain. Moderate breeze—rain.	
	8 p.m.	29.85	42	s.		
19	4 a.m.	29.91	38	ESE.	Light breeze—rain	Left Forteau bay
	12 noon	29.97	38	SE.	Very little breeze—rain. Light breeze—rain. Light breeze—fog.	8.30 a.m.
20	8 p.m. 4 a.m.	$29.91 \\ 29.88$	40 36	E. NW.	Light breeze-log.	
20	12 noon	29.00	30	W.	Moderate breeze—clear Heavy wind—overcast.	Arrived Natashquan 11 a.m.
	8 p.m.	30.12	26	W. NW.	Strong breeze—cloudy.	11 a.m.
21	4 a.m.	30.13	14	NNW	Moderate breeze—clear	Left Natashquan
	12 noon	30·28 30·14	27 28	NNW.	Moderate breeze—clear. Light breeze—cloudy	
	8 p.m.	50.14	48	DW.		how 11 10 m m
22	4 a.m.	30.09	22	WNW.	Moderate breeze—snow	Clark City wharf
	12 noon	30.14	18	NNW.	Moderate breeze—clear.	o to j manuli,
1	8 p.m.	30.28	13	NW.	Light breeze—clear.	

# Meteorological Observations as taken from Log of C.G.S. "Stanley" Voyage from Halifax, N.S., to Hudson Strait and Return to Quebec—Concluded

Date	Time	Barome- ter	Ther- mometer	Direction of Wind	Weather	Position
Nov. 23 24 25	4 a.m. 12 noon 8 p.m. 4 a.m. 12 noon 8 p.m. 4 a.m.	30.00 $29.84$ $30.10$ $30.40$ $30.28$	10 15 20 16 18 24 22	E. NE. NNW. WNW.	Moderate breeze—cloudy Strong breeze—thick snow. Light breeze—light snow. Strong breeze—clear. Strong breeze—clear. Moderate breeze—overcast. Light breeze—overcast.	Seven Islands bay.

Da	te	Time	Barome- ter	Ther- mometer	Direction, etc., of wind	Weather	Position
June	24	12 m. 6 a.m. 12 n.	29·55 29·40 29·45	68 61 62	Light—SWLight—SSWLight—ESE	Cloudy—until 4 a.mrain. Cloudy—rain. Rain.	(Left Quebec 9 a.m.) Belle-
	25	6 p.m. 12 m. 6 a.m. 12 n.	29·40 29·55 29·55 29·50	55 56 50 52	Light—WSW. Light—ENE. Light—E. Light—East.	Cloudy—foggy Fog—cloudy—until 6 a.m. Cloudy. Cloudy.	chasse light abeam. Cape Salmon light abeam. 25 m. E. of Father Point. Lat. 49-24-30 N., Long. 67-11 W.
	26	6 p.m. 12 m. 6 a.m. 12 n.	$   \begin{array}{r}     29.50 \\     29.45 \\     29.55 \\     29.48   \end{array} $	52 49 49 51	Light—ENE	Cloudy. Rain. Rain. Rain. Dense fog 1.30 p.m.—rain	West end Anticosti island.
	27	6 p.m. 12 m. 6 a.m.	29·45 29·45 29·50	49 62 54	Light—SE Light—SE Light—variable	Dense fog. Dense fog—rain. Dense fog—rain.	Heath Point lightship— 8.20 a.m.
	28	12 n. 6 p.m. 12 m. 6 a.m. 12 n.	29.60 29.65 29.65 29.55 29.65	63 55 50 50 56		Dense fog. Dense fog. Dense fog. Dense fog. Dense fog.	Anchored Forteau Bay, 3.50 p.m. Icebergs re-
	29 30	6 p.m. 12 m. 6 a.m. 12 n. 6 p.m. 12 m.	29.60 29.50 29.50 29.50 29.50 29.50	51 50 48 48 49 49	Light—westerly. Light—NW. Light—westerly. Light—westerly. Light—westerly.	Dense fog. Dense fog. Dense fog. Dense fog—cleared 5 p.m. Dense fog—Cleared 8 p.m. Cloudy until 4 a.m., then	ported.
		6 a.m.	29.55	46		clear. Dense fog at 6.50 a.m.— clear 7.15 a.m.	
		12 n. 6 p.m.	29·75 29·70	62 50	Calm Light—easterly	Clear—stopped at 11 p.m.	65 m. north of Belle Isle.
July	1	12 m.	29.85	42		—dense fog. Dense fog until 2 a.m.— then foggy.	
	2	6 a.m. 12 noon 6 p.m. 12 m. 6 a.m.	$\begin{array}{c c} 29 \cdot 40 \\ 29 \cdot 25 \\ 29 \cdot 10 \\ 29 \cdot 10 \\ 29 \cdot 05 \end{array}$	40 40 41 40 40	Moderate—ESE. Moderate—ESE. Light—SE. Light—SE. Light—easterly.	Foggy. Foggy. Foggy. Foggy. Foggy—dense fog at 10.30	55° 33′ N. Lat., 57° ·01′W. Long.
	3	12 n. 6 p.m. 12 m.	29·20 29·45 29·55	41 38 38	Light—NE Light—NNE Light—NNE	a.m. Foggy. Dense fog until 4 a.m., then	58° 10′ N. Lat., 59° 45′ W. Long.
		6 a.m. 12 n. 6 p.m.	29·70 29·60 29·40	39 40 38	Light—NNW Light—SSW Light—SSW	foggy. Clearing. Cloudy	Four Peaks abeam at 9.50 a.m. Anchored in Port Burwell
	4	12 m. 6 a.m. 12 n. 6 p.m.	$\begin{array}{r} 29.55 \\ 29.25 \\ 29.50 \\ 29.40 \end{array}$	40 44 40 40	Moderate—SE	Cloudy—rain. Cloudy. Rain showers. Cloudy. fog with light	at 8.45 p.m.  Left Port Burwell at 5 p.m.
	5	12 m.	29 · 47	32	  Light—NE	NE. wind at 11 p.m.	Loose ice first encoun- tered at 11.45 p.m. Proceeding towards Wake-
		6 a.m. 12 n.	29·42 29·50	34 45		Clearing	ham Bay. A kpatok Island abeam at
	6	6 p.m. 12 m. 6 a.m. 12 n. 6 p.m.	29·50 29·55 29·40 29·40 29·37 29·50	34 36 40 38	Light—NW Light—northerly Light—NW Light—NW Light—NW Light—north	Clear. Cloudy—dense fog at 9 a.m Cloudy—dense fog at 2 p.m. Foggy—stopped—dense fog 11 p.m. Foggy.	
	7	12 m. 6 a.m. 12 n. 6 p.m.	$\begin{array}{c} 29 \cdot 15 \\ 29 \cdot 10 \\ 29 \cdot 10 \\ 29 \cdot 22 \end{array}$	34 36 44 46	Light—NW Light—NNW Light—N.E. Calm	fog 11 p.m. Foggy. Foggy. Thick fog since 11 a.m. Clear	In clear water at 10.50 a.m. Abeam of Big Island, 8 p.m.

D	ate	Time	Barome- ter	Ther- mometer	Direction, etc., of wind	Weather	Position
July	8	12 m. 6 a.m.	29·28 29·30	38 41	Light—northerly Light—NW	Clear until 4 a.m Cloudy	In ice west of Big island. Clear of ice—Weggs island
		12 n. 6 p.m.	29·45 29·50	52 52	Light—NWModerate—NW	Clear. Clear	bears S. 60 deg. West.  Arrived at and anchored
	9	12 m.	29.35	50			in Wakeham Bay 1.30 p.m. Left Wakeham at 7 a.m.
		6 a.m. 12 n. 6 p.m.	$ \begin{array}{r} 29 \cdot 40 \\ 29 \cdot 50 \\ 29 \cdot 60 \end{array} $	39 45 39	Moderate—north	Clear	62° 20′ N. Lat., 72° 10′ W. Long.
	10	12 m. 6 a.m.	29 · 43 29 · 55	36 38	CalmLight—NNWLight—NNE	Cloudy.	
		12 n.	29.70	48	Light—West	Clear	Anchored Nottingham Island 11 a.m.
	11	6 p.m. 12 m.	29·60 29·55	44 46	Light—NNW Light—NNW	Clear Cloudy	Michored in Sugius Tinet
		6 a.m.	29.60	56	Moderate—NNW	Clear.	at 1 a.m.
		12 n. 6 p.m.	29 · 62 29 · 65	60 56	Light—ESE Light—East	Clear.	
	12	12 m. 6 a.m.	29·64 29·78	48 64	CalmLight—westerly	Clear	Left Sugluk at 7 a.m.
		12 n.	29·65 29·70	48 59	Moderate—north	Hazy Clear. Cloudy. Cloudy.	Anchored Charles Inlet, 1.30 p.m.
,	13	6 p.m. 12 m.	29.65	42	Light—NNW	Cloudy.	
		6 a.m. 12 n.	29·60 29·60	48 54	Light—NWLight—westerly	CloudyCloudy.	Left Charles Inlet 7 a.m.
		6 p.m.	29.60	50	Moderate—WSW	Cloudy.	Anchored Wakeham Bay, 7.30 p.m.
	14		29.60	62	Light—westerly	Cloudy.	(100 primi
		6 a.m. 12 n.	29·50 29·65	59 74	Gale—WNW	Cloudy—smoky.	
	15	6 a.m.	29·55 29·55	70 60	Strong—WNW. Strong—WNW. Moderate—SW.	Smoky.	
	10	6 a.m.	29.55	65	Moderate—SW	Smoky.	
		12 n. 6 p.m.	29.60	70 70	Moderate—NWLight—NW	Cloudy.	
	16		29·40 29·45	45 60	CalmLight—SE	Cloudy.	Left Wakeham Bay.
		12 n.	29 · 25	47 52	Light—SSE	Cloudy.	Anchored Diene Bay at
	17	6 p.m. 12 m.	29·20 29·20	56	Light—WSW	Cloudy. Cloudy.	8 p.m.
		6 a.m. 12 n.	29·10 29·00	52 48	Light—ENE	Bain.	
	10	6 p.m.	28·90 28·85	44 42	Light—NE.  Moderate breeze—N.E  Moderate breeze—N.E  Moderate breeze—NE	Rain.	
	18	6 a.m.	28.90	42	Moderate breeze—N.E	Foggy.	
		12 n. 6 p.m.	28·90 28·96	45 39	Strong breeze-NNW	Rain and log.	
	19		29·35 29·50	40 43	Moderate breeze—north. Strong breeze—NNE	Rain and fog.	
		0 4.111.	25.00	10	bottong breeze 14142	Gale at 8 a.m.—northerly	
		12 n.	28.90	40	Gale-northerly	heavy seas. Cloudy.	
	20	6 p.m. 12 m.	29·05 29·15	40 40	Gale—northerly Strong breeze—NNE Strong breeze—NNE	Cloudy. Clear.	
	20	6 a.m.	29 - 25	58	Moderate breeze—north-	Clear.	
		12 n.	29.50	72	erly. Calm	Clear.	
	21	6 p.m. 12 m.	29·35 29·32	54 50	South—Light Light—northerly		
	~ ~	6 a.m.	29.35	44	Light-NE	Cloudy	Left Diana Bay at 7 a.m.
		12 n. 6 p.m.	29·30 29·34	40	Light—NE Light—SSW	Cloudy.	
	22	12 m.	29 · 25	39	Light—southerly	Cloudy.	Arrived Port Burwell 6.20
		6 a.m. 12 n.	29·20 29·30	42 40	Light—SE Light—WSW	Cloudy	a.m.
		6 p.m.	29.35	38	Light-WSW	Cloudy.	Left Port Burwell at 4 a.m
	23	12 m. 6 a.m.	29·40 29·45	37 34	Light—SW Light—NW	Cloudy—dense fog	Abeam Button Islands.
		12 n.	29.55	42	Light-W	Dense fog—cleared 1 p.m. Cloudy	Abeam Acadia Cove.
	24	6 p.m.	$   \begin{array}{r}     29.50 \\     29.50   \end{array} $	40 40	Strong—SE Moderate—SSE	Cloudy	
	27.	6 a.m.	29 - 20	45	Light—southerly	Cloudy	Anchored Button islands, 8 a.m.
		12 n. 6 p.m.	29·40 29·25	72 70	Light—southerly Heavy squalls	Cloudy. Rain.	a, III.
	95		29 · 20	40	Light—westerly	Dense fog at 10 p.m.	
	25					Cloudy—squally—fog until 5 a.m. Cloudy.	
		6 a.m. 12 n.	29·30 29·40	44 42	Moderate—N.W Moderate—N.W Light—SW	Cloudy.	
		6 p.m.	29.50	42	Light—SW	Cloudy.	

Meteorological Observations as Taken from Log of C.G.S. "Montcalm" Voyage from Quebec to Hudson Strait and Return to Quebec—1928—Con.

Da	ate	Time	Barome- ter	Ther- mometer	Direction, etc., of Wind	Weather	Position
July	26	12 m.	29.55	40	Light—SW	Cloudy.	
o ung		6 a.m.	29.60	42	Light—southerly	Rain	Left for Port Burwell at
		12 n.	29.75	50	Tight NINE	Light rain	3.20 a.m. Arrived at Port Burwell at
		6 p.m.	29.75	48	Light—NNE Moderate breeze—NE	Light rain	6.10 a.m.
	27	12 m.	29.70	49	Light—easterly	Rain.	T 4.70 .70 .11 .40
		6 a.m.	29.70	58	Light-NE	Cloudy	Left Port Burwell at 3 a.m.
		12 n.	29·75 29·75	42 44	Light—northerly  Light—northerly	Rain and fog.	Anchored Cape Hopes Ad-
	28	6 p.m. 12 m.	29.75	42	Moderate—northerly	Cloudy.	vance (Diana bay) 9.10
	20	6 a.m.	29.80	44	Light-NW	Cloudy.	p.m.
		12 n.	29.95	56	Light-northerly	Cloudy.	
		6 p.m.	29.80	44	Calm	Rain and fog—dense fog 12 m.	
	29	12 m.	29.75	44	Light-ENE	Dense fog.	
		6 a.m.	29.70	41	Light-NE	Fog.	
		12 n.	29.75	42 40	Light—NE Moderate—ESE	Foggy and rain. Foggy and rain.	and the second s
	30	6 p.m. 12 m.	29.65 $29.55$	40			
	00	6 a.m.	29.50	44	Moderate—E.S.E. Strong—SE. Moderate—SE. Moderate—E.N.E. Moderate—E.N.E. Moderate—NE. Moderate—NE. Moderate—NNE. Light—NNE.	Foggy and rain.	
		12 n.	29.50	44	Moderate—SE	Cloudy.	
	01	6 p.m.	29·95 29·40	44	Moderate—easterly	Roin	
	31	12 m. 6 a.m.	29.35	44	Moderate—NE	Rain and foggy.	
		12 n.	29.25	47	Moderate-NE	Rain and fog.	
		6 p.m.	29 · 20	43	Moderate—NNE	Rain and fog.	
Aug.	1	12 m.	29·20 29·25	44	Light—NNELight—easterly	Rain and fog.	
		6 a.m. 12 n.	29.20	45 46	Light—easterly	Rain and fog.	
		6 p.m.	29.30	44	Light—easterly Moderate—ESE	Cloudy.	
	2	12 m.	29 - 40	40	Light—easterly	Cloudy.	
		6 a.m. 12 <b>n</b> .	29·40 29·50	44 42	Light—ENE Moderate—ENE	Rain and fog.	
		6 p.m.	29.55	44	Light—ESE	Foggy.	
	3	12 m	29.65	42	Light—NNE	Cloudy.	
		6 a.m.	29.65	42	Light—NE	Clear.	
		12 n. 6 p.m.	29·90 29·85	65 50	Light—northerly Light—ESE	Cloudy. Clear.	
	4	12 m.	29.75	42	Calm	Fog until 8 a.m.	
		6 a.m.	29.30	44	Calm.	C	
		12 n.	29·99 29·85	72 57	Light—northerly	Clear.	
	5	6 p.m. 12 m.	29.85	44	Calm. Light—WSW.	Clear.	
		6 a.m.	29.95	50	Light-SW	Cloudy.	
		12 n.	29.85	62	Calm Light—SW. Light—SW.	Clear.	
	6	6 p.m. 12 m.	29·80 29·65	55 42	Light—SW	Cloudy-rain at 4 a m	
	0	6 a.m.	29.65	54	Light—East.	Cloudy.	
		12 n.	29.60	62	Light—SE	Clear.	
	7	6 p.m. 12 m.	$29.72 \\ 29.70$	50 42	Calm Light—SSW	Cloudy—rain at 4 a.m., Cloudy. Clear. Foggy. Fog until 4 a.m., Cloudy.	
	(	6 a.m.	29.75	45	Light—southerly	Cloudy.	
		12 n.	29.60	52	Light—southerly Light—SSW Light—southerly	Cloudy.	
		6 p.m.	29.50	54	Light—southerly	Cloudy.	
	8	12 m. 6 a.m.	29.30 $29.35$	50 55	Light—southerly Light—SSW	Cloudy. Rain.	
		12 n.	29.35	56	Light—easterly	Dense fog until 4 p.m	
						Cloudy.	
	0	6 p.m.	29.45	50	Calm	Foggy.	
	9	12 m. 6 a.m.	29·35 29·35	49 56	Light—SE Light—southerly	Foggy until 4 a.m. Cloudy.	
		12 n.	29.60	70	Light—NE	Cloudy.	
		6 p.m.	29 · 40	50	Light-easterly	Cloudy.	
	10	12 m.	29.20	48	Light -southerly	Cloudy.	Left Cape Hopes Advance
		6 a.m.	29.00	49	Light—SW	Rain at 4 a.m	for Wakeham at 5 a.m.
		12 n.	28.95	45	Light-SW	Dense fog at 10 a.m. to	,
		0	00.00	40	T. 1.	noon. Clear	A. C. I. W.L.L. D.
	11	6 p.m. 12 m.	29·00 29·15	48 45	Light—easterly Light—easterly	Cloudy.	6 p.m.
	11	6 a.m.	29.10	50	Light—easterly	Cloudy.	o p.m.
		12 n.	29.30	60	Light-easterly	Cloudy.	
	10	6 p.m.	29.30	54	Light—ENELight—NW	Cloudy.	
	12	12 m. 6 a.m.	$29.35 \\ 29.40$	48 44	Light—NW	Cloudy,	Left Wakeham Bay 6 a.m.
		12 m.	29.44	66	Light—NW. Light—NNW.	Cloudy Clear Rain	Abeam Wegges island.
		6 p.m.	29.45	46	Light-SSE		
	13	12 m.	29.05	40	Light—southerly	Rain-lightning.	A .1 1 NT - 141 - L
		6 a.m. 12 n.	$28.85 \\ 28.80$	42 43	Moderate—southerly   Strong—WSW	Dense fog-heavy rain	Anchored Nottingham island.
		6 p.m.	28.75	43	Strong—WSW	Foggy. Foggy—heavy rain	Left Nottingham island.
	14	12 m.	28.80	42	Moderate-NW	Cloudy	Anchored Erik Cove 7.15
		6 a.m.	29 · 15	40	Moderate-NW	Dense fog—cleared 7 a.m.	a.m.
		12 n.	29·30 29·50	46	Strong—NNWStrong—NNW	Cloudy—rain showers.	

Da	ate	Time	Barome- ter	Ther- mometer	Direction, etc., of Wind	Weather	Position
Aug.	15	12 m.	29 · 45	44	Light-NW	Clear.	
22000.	20.1	6 a.m.	29.40	45	Light-NW	Clear	Left Erik Cove 3 a.m.
		12 n.	29.50	46	Light—NW	Clear	Anchored Nottingham
		6 p.m.	29.50	47	Light-NW	Clear.	Island 7.30 a.m.
	16	12 m.	29.50	40		Clear.	
		6 a.m.	29.55	43		Clear.	
		12 n.	29.65	52 42		Clear. Dense fog.	
	17	6 p.m.	29·50 29·40	42	Light—westerly Light—WSW	Cloudy.	
	17	12 m. 6 a.m.	29.40	42	Light—westerly	Dense fog.	
		12 n.	29 - 45	42	Light-WSW	Dense fog.	
		6 p.m.	29.45	40	Light-SW	Dense fog.	
	18	12 m.	29.40	58	Light-southerly	Dense fog until 4 a.m.	
		6 a.m.	29.50	44	Light-SW	Cloudy	Left Nottingham 7.20 a.m. Anchored Sugluk 7.10 p.m.
		12 n.	29.50	48	Light-SW	Cloudy.	Anchoused Sugdule 7 10 mm
	4.0	6 p.m.	29.50	50	Light—SE	Clear	Anchored Sugiuk 7.10 p.m.
	19	12 m.	29·45 29·50	48 58	Light—SW Light—southerly	Clear.	
		6 a.m. 12 n.	29.40	65	Moderate—SW	Clear. Clear. Clear.	
		6 p.m.	29.55	62	Moderate—SW	Clear.	
	20	12 m.	29 · 20	58	Moderate—SW. Light—SW. Moderate—SE. Moderate—SSE. Moderate—NW.	Clear	Left Sugluk at 1.25 a.m.
		6 a.m.	29.05	42	Moderate-SE	Cloudy.	
		12 n.	29.05	42	Moderate-SSE	Cloudy.	A 1
	0.4	6 p.m.	29.30	42	Moderate-NW	Cloudy	Anchored Wakeham Bay
	21	12 m.	29.40	42	11 dg nt IN W	Cloudy Cloudy	4.30 p.m. Left Wakeham 3 a.m.
		6 a.m.	$29.55 \\ 29.60$	46 68	Calm Light—ESE	Cloudy.	Leit wakenam 5 a.m.
		12 n. 6 p.m.	29.00	44	Moderate—SE	Cloudy	Anchored N. side Charles
		o p.m.	20.10	77	Moderate Dis	Cloudy	island 6 p.m.
	22	12 m.	29.25	40	Moderate—SE	Cloudy.	
		6 a.m.	29 - 15	40	Moderate—ESE	Rain	Left anchorage 9 a.m.—
		12 n.	29.00	42	Strong-ESE,	Rain.	heavy seas and strong
							wind.
	00	6 p.m.	28.80	42	Moderate—WNW	Fog-rain	Anchored N. side Charles
	23	12 m.	28.95	40	Strong—NW	Cloudy.	7 p.m.
		6 a.m. 12 n.	29·30 28·85	44	Strong—SSW	Cloudy	
		6 p.m.	28.80	50	Heavy gale—SW	Cloudy	
	24	12 m.	29.05	40	Heavy gale—SW Strong gale—WSW	Rain.	
		6 a.m.	29.40	42	Strong breeze—SW	Cloudy.	
		12 n.	29.55	45	Light-SE	Cloudy.	
		6 p.m.	29.20	40	Moderate—SE Moderate—WSW	Heavy rain.	
	25	12 m	28.75	40	Moderate-WSW	Cloudy.	
		6 a.m.	28.95	44	Moderate—SW Strong—SW.—gale	Rain snowers.	
		12 n.	$   \begin{array}{r}     29 \cdot 20 \\     29 \cdot 25   \end{array} $	48 46	Moderate—WSW	Cloudy.	
	26	6 p.m. 12 m.	29.20	48	Moderate breeze—WSW.	Cloudy.	
	20	6 a.m.	29.20	46	Light—SW	Cloudy	
		12 n.	29 - 20	48	Light—westerly Light—westerly Strong breeze—westerly Light—SW. Moderate—WSW.	Partly cloudy	Left Charles Island 1 p.m.
		6 p.m.	29.30	44	Light—westerly	Rain showers	Arrived at Sugluk inlet
	27	12 m.	29.35	42	Strong breeze—westerly	Cloudy.	6.30 p.m.
		6 a.m.	29.40	46	Light—SW	Cloudy.	
		12 n.	29·40 29·35	52 50	Moderate—WSW	Rain showers	
	28	6 p.m. 12 m.	29.35	46	Light—NW	Clear.	
	20	6 a.m.	29.35	46	Light—SW	Cloudy.	
		12 n.	29 - 25	62	Light-SW	Cloudy.	
		6 p.m.	29.05	48	Moderate-ENE	Cloudy.	
	29	12 m.	28.85	46	Light—easterly	Fog.  Clearing	Loft Sugluk of 6 20 a m
		6 a.m.	28.90	42	Moderate NE	Overeget	Anchored Erik Cove 1.40
		12 n.	29.50 $29.50$	40	Light—NE	Forgy.	p.m.
	30	6 p.m. 12 m.	29.05	48	Light—easterly	Cloudy.	
	00	6 a.m.	29.05	44	Light—easterly	Cloudy.	
		12 n.	29.20	44	Light-W.N.W	Cloudy.	
		6 p.m.	29 - 20	40	Light—westerly	Clear.	
	31	12 m.	29 · 20	44	Light-WSW	Cloudy.	
		6 a.m.	29.25	46	Light—SW	Clear.	
		12 n.	$ \begin{array}{c c} 29.30 \\ 29.25 \end{array} $	50	Light—NW	Clear. Cloudy.	
Claud.	4	6 p.m.		44	Light—WNW Light—SSW	Foggy—until 8 a.m.	
Sept.	1	12 m. 6 a.m.	$   \begin{array}{c c}     29 \cdot 20 \\     29 \cdot 25   \end{array} $	42 44	Light—SW	Foggy	Left for Nottingham at 7
		12 n.	29.25	40	Light-NW		a.m., but had to retur
		6 p.m.	29 · 13	45	Light—northerly	Clear in Cove.	on account of dense fog
		O Prosts					in strait.
	2	12 m.	29 · 13	39	Light-W.N.W	Cloudy	Left for Nottingham at
		6 a.m.	29.25	39	Light—northerly	Cloudy—snow flurries	5.10 a.m., anchored there
		12 n.	29.15	44	Light—NE	Cloudy.	at 10 a.m.
		6 p.m.	29.30	35	Light—northerly Light—NW	Cloudy. Clear.	
	3	12 m.	29.30	34 42	Light—NW	Cloudy.	
		6 a.m. 12 n.	29·30 29·30	42	T : L - BTW7	Clouder	
		6 p.m.	29.20	40	Strong breeze-westerly	Cloudy—foggy	Left Nottingham 10.10
		O Prisant			heavy swell.		p.m.
			1				1

Date	Time	Barome- ter	Ther- mometer	Direction, etc., of Wind	Weather	Position
Sept. 4	12 m.	29.05	40	Strong-WSW	Rain	
гере. 1	6 a.m.	$29 \cdot 05$	44	Moderate—SW	Rain—fog	Anchored Erik Cove,
	12 n.	29.05	46	Moderate—SW	Cloudy—foggy outside.	7 a.m.
	6 p.m.	29.05	46	Moderate—SW	Cloudy.	
5	12 m.	28.30	46	Strong—SW	Cloudy.	
	6 a.m.	28.30	48	Strong—SW	Rain.	
	12 n.	28.30	48	G le—SSW	Rain and fog.	
	6 p.m.	28.00	41	Wind moderating—SSW	Rain and fog.	
6		28.35	38	Strong-NNW	Snow—fog.	
	6 a.m.	28.80	34			
	12 n.	29.05	36	Strong—northerly. Strong—northerly. Gale—WSW. Moderate—NNE. Moderate—NNE. Moderate—NNW. Moderate—NNW. Strong—NE. Moderate—NNW. Moderate—NNW. Moderate—NNW.	Rain and snow.	
	6 p.m.	29 - 15	34	Gale—WSW	Rain and snow.	
7	12 m.	29 · 15	36	Moderate—NNE	Cloudy.	
	6 a.m.	29.20	37	Moderate—NNE	Cloudy.	
	12 n.	29.20	37	Moderate—NNW	Snow—sleet—fog.	
	6 p.m.	29.25	36	Moderate-NW	Fog—snow flurries.	
8	12 m.	29 · 20	37	Moderate—NNW	Snow flurries.	
	6 a.m.	29.20	36	Strong -NE	Thick snow.	
	12 n.	29 · 20	33	Moderate—NNW	Cloudy.	
	6 p.m.	29 · 20	38			
9	12 m.	29.20	35	Moderate-NW	Cloudy.	
	6 a.m.	29-20	35	Strong-NNW	Snow squalls	Left for Nottingham 5 a.m
	12 n.	29.05	34	Strong—NW	Sleet	Anchored there at 9.00
	6 p.m.	28.95	38	Gale-SW	Snow squalls	Left Nottingham at 12.30
10	12 m.	28.80	38	Strong—southerly	Cloudy	p.m.
	6 a.m.	28.75	36	Strong-SSE	Rain and snow.	p.m.
	12 n.	28.70	35	Moderate—St.	Snow and sleet	
	6 p.m.	28-85	36	Strong-NNE	Snow	Off Wakeham Bay.
11	12 m.	29 - 20	32			
	6 a.m.	29.35	40	Moderate—NW	Foggy.	Anchored Wakeham Bay,
	12 n.	29.65	42	Moderate-NW	Cloudy	Anchored Wakeham Bay.
	6 p.m.	29.56	38			
12	12 m.	29.20	40	Moderate—SW	Clear. Cloudy	
	6 a.m.	29.00	43	Moderate-WNW	Cloudy	Lett Wakeham Bay 4.35
	12 n.	29.00	44	Moderate—westerly	Cloudy.	a.m.
	6 p.m.	29.05	44	Light—NNW	Cloudy	Anchored Cape Hopes Ad-
13	12 m.	29.25	39	Moderate—NE	Cloudy.	vance 1.15 p.m.
	6 a.m.	29.40	38	Light—NNE	Snow—sleet.	
	12 n.	29.70	35	Strong—NNE	Cloudy.	Lett Wakeham Bay 4.35 a.m. Anchored Cape Hopes Ad- vance 1.15 p.m.
	6 a.m.	29.75	37	Strong-NNE	Cloudy.	
14	12 m.	29.65	36	Light—SW	Clear.	
	6 a.m.	29.60	41	Moderate—west	Light rain.	
	12 n.	29.60	46	Moderate—west. Moderate—northerly Light—NW. Calm. Light—SW. Light—SW.	Cloudy.	
	6 p.m.	29.65	45	Light—NW	Clear.	
15	12 m.	29 - 65	44	Calm	Light fog.	
	6 a.m.	29 - 20	45	Light—SW	Clear.	
	12 n.	29.25	55	Light—SW	Clear.	
	6 p.m.	29.45	50	Light—SW	Clear	Left for Wakeham Bay 6 p.m. Anchored Wakeham Bay,
16	12 m.	29.50	42	Light—SW	Clear.	6 p.m.
3260	6 a.m.	29.40	46	Light—Sw	Clear	Anchored Wakeham Bay,
	12 n.	29.25	46	LIKE DE	CHORRIV.	7 a.m.
4.79	6 p.m.	29.10	44	Light Southerly	roggv.	
17	12 m.	29·00 28·95	46	Light—southerly	Rain.	
	6 a.m.	28.90	46	Light—southerly	Foggy.	
	12 n.	28.90	54 54	Light—WSW	Clauder	
10	6 p.m. 12 m.	28.85	40	Light—northerly	Clouds.	
10	6 a.m.	28.90	44	Light—NE	Pain	
	12 n.	28.95	4.0			
	6 p.m.	29.05	44	Light—northerly	Foggy. Cloudy.	
19	12 m.	29.10	42	Moderate-NNW.	Cloudy	
20.,	6 p.m.	29.30	40	Light-NW.	Cloudy	Loft Walsaham 5 a m
	12 m.	29.35	42	Light-NW.	Cloudy	Left Wakeham 5 a.m.
	6 p.m.	29.50	39	Light—easterly	Cloudy	Anchored Cape Hopes Ad-
20	12 m.	29.50	42	Moderate-NNW.	Clour	Michored Cape Hopes Hu-
	6 a.m.	29.55	40	Light—SSE.	Cloudy	vance 1.30 p.m.
	12 n.	29.35	42	Light-SSE	Cloudy.	Latt for Posolution island
	6 p.m.	29.40	36	Moderate—SSE	Cloudy	Left for Resolution island at 11 a.m.
21	12 m.	29.35	34	Tight-or	Rain	av II a.III.
	6 a.m.	29.30	34	Light—SSE	Cloudy	Anchored Acadia Cove
	12 n.	29.35	37	Moderate-SSE	Cloudy	11.15 a.m.
	6 a.m.	29 - 20	37	Strong-SE	Cloudy	11.10 0.111.
22	12 m.	29 - 15	40	Moderate southerly.	Cloudy.	
	6 a.m.	29.15	40	Moderate—southerly Gale—SE	Foggy-light rain	
	12 n.	29.20	41	Gale—SE	Cloudy.	
	6 p.m.	29.20	40	Moderate—SE	Cloudy.	
23	12 m.	29-20	40	Strong-SE	Rain with for until 4 n m	
	6 a.m.	29 - 20	42	ourong—southerty	Rain.	
	12 n.	29.25	42	Strong—southerly		
	6 p.m.	29.30	42	Moderate-easterly	Heavy rain	
24	12 m.	29.20	40	Strong-SE	Dain 1 t 127 10	
	6 a.m.	29.20	42	Strong—SE. Moderate—SSW. Light—SE.	and tog until 10 A.III.	
	12 n.	29.25	40	Moderate-SSW	Fog.	
	6 p.m.	29.15	42	Light_ST	(1)	

Date	Time	Barome- ter	Ther- mometer	Direction, etc., of Wind	Weather	Position
Sept. 25	12 m.	29.20	40	Moderate—SE	Rain.	
Беро. 20	6 a.m.	29.30	47	Calm Light—SW. Light—SSE. Moderate—southerly.	Rain.	
	12 n.	29.50	42	Light-SW	Clear.	
	6 p.m.	29.60	40	Light—SSE	Clear.	
26	12 m.	29.65	40	Moderate -southerly	Clear.	
	6 a.m.	29·65 29·45	40 38	Moderate—southerly	Clear.	
	12 n.	29.45	41	Strong —easterly	Clear. Snow and rain. Snow and rain. Rain and fog. Foggy. Foggy. Cloudy. Clear. Cloudy.	
27	6 p.m. 12 m.	28.95	42	Strong—easterly	Rain and fog.	
201	6 a.m.	29.00	38	Strong-SE	Foggy.	
	12 n.	29.05	38	Strong-SSW	Foggy.	
	6 p.m.	29.20	36	ModerateSW	Cloudy.	
28	12 m.	29.30	35	Calm	Clear.	I # D 1 # 11 14-
	6 a.m.	29.30	38	Light—SW	Cloudy	Left Resolution island for Port Burwell 5.50 a.m.
	12 n. 6 p.m.	29·20 29·15	46 42			Anchored Port Burwell,
29	12 m.	29.10	42	Light-WNW.	Rain	12 35 n m
20	6 a.m.	29.20	38	Moderate-westerly	Cloudy	Left Port Burwell at 5.30
	12 n.	29.30	42			9 m
	6 p.m.	29.30	38	Strong-westerly	Foggy.	Off Cape Hopes Advance
30	12 m.	29.25	36	Light-hortherry	Cloudy.	at 7.20, unable to see
	6 a.m.	29.40	40	Light-northerly	Clear.	land-sighted land at
	12 n.	29.55	44	Moderate-northerly	Clear.	10.40 p.m. Light hoisted
	6 p.m.	29.40	38	Moderate—northerly	Cloudy.	on D.F. mast and pro-
0.1.1	10	20.20	40	Moderate NNW	Cloudy	ceeded into Diana Bay anchered 12.55 p.m.
Oct. 1	12 m.	29·30 29·35	40 42	Moderate—NNW Moderate—northerly	Oxoreast	anencred 12.55 p.m.
	6 a.m. 12 n.	29.35	44	Moderate—northerly	Cloudy	
	6 p.m.	29.40	38	Moderate—NNE	Cloudy.	
2	12 m.	29.40	36	Moderate-NE	Cloudy.	
2	6 a.m.	29.45	40			
	12 n.	29-40	40	Light—easterly	Cloudy. Cloudy. Cloudy. Foggy. Rain. Rain and fog Dense fog until 8 a.m.	
	6 p.m.	29.40	36	Light-SSE	Cloudy.	
3	12 m.	29.25	34	Light—SSE	Cloudy.	Aboom Wolcohom Boy
	6 a.m.	29·30 29·40	33	Moderate—SE	Poin	Anchored 7 30 a m
	12 n.	29.40	33 33	Light-SSE	Rain and for	Allehored 1.50 a.m.
4	6 p.m. 12 m.	29.75	38	Light-SSE.	Dense fog until 8 a.m.	
ч	6 a.m	29.80	38	Light—SSE		
	12 n.	29.85	39	Moderate southerly	Cloudy.	
	6 p.m.	29.85	38			
5	12 m.	29.50	35	Strong—easterly	Fog until 4 a.m.	
	6 a.m.	29.35	40	Strong—SSE	Rain and fog.	
	12 n.	29.10	42	Strong—SSE	Heavy rain and foggy. Light rain and foggy.	
0	6 p.m.	28.90	39	Strong SSE	Heavy rain until 8 a.m.	
6	12 m. 6 a.m.	28 · 65 28 · 60	42	Strong—easterly Strong—SSE Strong—SSE Strong—SSE Strong—SSE Strong—SSE Strong—SSE	Theavy rain ditors o distri	
	12 n.	28.60	45	Strong—SSE	Some fog from 8 a.m. to	
	12 11.	20 00	10		4 p.m.	
	6 p.m.	28.80	43	Strong-SW	Cloudy.	
7	12 m.	28.90	40	Light—SW Moderate—SSW	. Cloudy. Partly cloudy	Loft Wakaham Bay at 6
	6 p.m.	28.90	38	Moderate—SSW	Clear	a m
	12 n.	29.10	38 37	Light—southerly	Clear.	Anchored Cape Hopes Ad
0	6 p.m.	29·20 29·15	38	ILight—SSW	Clear	vance 2 p.m.
8	12 m. 6 a.m.	29.13	38	Light SW	Clear.	
	12 n.	29.40	40	Light-SW	Clear. Cleur.	Calibrating D.F. station.
	6 p.m.	29.35	38	Light SW. Light—SW. Light—SSE.		
9	12 m.	29.30	34	Light-SSE	. Clear.	
	6 a.m.	29.15	37	Light-SSE	Clear.	Calibrating D.F. station
	12 n.	29.10	38	Light—SSE	Cleudy	Carrotaving D.I. Soution
10	6 a.m.	28.95	37	Strong—SSE	Rain and snow	
10	12 m.	28.85	38 36	Light—SE	Rain.	
	6 a.m.	28·90 28·95	36	Moderate—SE	Rain.	
	12 n. 6 p.m.	28.95	38	Light-SE	Rain. Rain. Foggy Rain until 10 a.m. Cloudy.	Leit for Port Burwell at
11		29.15	36	Light-SSE	. Rain until 10 a.m.	4.30 p.m.
**	6 a.m.	29.20	36	LightSE		Anchored Fort Burwell,
	12 n.	29.30	42	Light-easterly	. Cloudy.	9.35 a.m.
	6 p.m.	29.40	42	Light—easterly Light—ENE	Rain.	
12	12 m.	29.45	39	Light-ENE	. Snow.	
	6 a.m.	29.50	40	Light—NELight—NNW	Snow—some fog.	
	12 n.	29.45	39	Moderate NE	Snow.	
10	6 p.m.	29.35	39	Moderate—NELight—NE	Snow until 12 noon.	
13	12 m.	29·30 29·30	39	Light—NE	Total district	
	6 a.m. 12 n.	29.35	40	Moderate-NE	. Cloudy.	
	6 p.m.	29.33	38	Moderate-NNE		
14		29.40	38	Moderate-northerly	. Cloudy.	
14.	6 a.m.	29.40	34	Moderate-NNE	. Cloudy.	
	12 n.	29.35	34	Moderate-NNE	. Cloudy.	
		1 00 00		Moderate-northerly		
	6 p.m.	29.30	35	Woderate northerly	Clauda	
15	6 p.m. 12 m.	29.50	34	Moderate-northerly	. Cloudy.	
15	6 p.m.		35 34 34 34	Moderate—northerly Moderate—NNW	Cloudy.	

Meteorological Observations as Taken from Log of C.G.S. "Montcalm" Voyage from Quebec to Hudson Strait and Return to Quebec—1928—Con.

Date	Time	Barome- ter	Ther- mometer	Direction, etc., of Wind	Weather	Position
Oct. 16	12 m.	28.90	40	Light—NW	Cloudy.	
200. 20	6 a.m.	28.95	38	Moderate-NNW	Snow showers. Cloudy.	
	12 n.	28.95	39	Moderate-NNW	Cloudy.	
	6 p.m.	29.15	39	Strong-NNW	Cloudy.	
17	12 m.	29.15	32	Strong-NNW	Snow.	
	6 a.m.	29.30	32	Strong	Snow.	
	12 n.	29.30	32	Strong-NW	Cloudy.	
	6 p.m.	29.30	32	Moderate-N W	Cloudy.	
18	12 m.	29.30	32	Strong WNW	Snow squais.	
	6 a.m.	29·30 29·40	34 34	Strong WNW	Snow showers.	
	12 n. 6 p.m.	29.50	28	Moderate-NW.	Cloudy	
19	12 m.	29.50	39	Moderate-NNW	Snow showers.	
10	6 a.m.	29.75	32	Strong-NW	Cloudy.	
1	12 n.	29.75	36	Strong-NW	Cloudy.	
	6 p.m.	29.70	30	11.10 ht SW	Snow flurries.	
20	12 m.	29.35	33	Calm. Light—NW.	Cloudy.	
	6 a.m.	29.40	33	Light—NW	Snow showers.	
	12 n.	29-45	33	Light-NWLight-NNW	Snow showers.	
	6 p.m.	29.40	33	Light-NNW	Cloudy.	
21	12 m.	29.35	34	Light-NNW	Snow flurries.	
	6 a.m.	29.35	33	Light—SW	Cloudy.	
	12 n.	29·30 29·30	30 33	Light—SW. Light—NW. Light—WNW.	Snow flurries.	
22	6 p.m.	29.30	29	Light—NW	Cloudy	
22	12 m. 6 a.m.	29.35	34	Light—NW Light—WNW Light—NNW	Snow furries	
	12 n.	29.35	35	Light-NNW	Snow showers	
	6 p.m.	29.40	29	Light—northerly	Partly cloudy	
23	12 m.	29.45	28	Calm	Clear.	
20.1	6 a.m.	29.50	28	Calm Light—ENE	Clear.	
	12 n.	29.50	30	Light—easterly	Clear.	
	6 p.m.	29.45	32	Light—easterlyLight—SSE	Clear.	
24	12 m.	29.45	32	Light-SE	Cloudy.	
	6 a.m.	29.45	32	Calm	Snow snowers.	
	12 n.	29.50	36	Light—easterly	Cloudy	
	6 2 22	29.45	34	Light SE	Cloudy	7.30 a.m.
0.5	6 p.m. 12 m.	29.50	34	Moderate—easterly	Clouds	Anchored at 10.55 a.m.
25	6 a.m.	29.45	30	Light-northorly	Cloudy.	
	12 n.	29.50	32	Light—northerly	Snow showers	
	6 p.m.	29.45	30	Light—NNE Moderate—ENE	Cloudy	
26	12 m.	29.45	34	Strong-ENE	Cloudy.	
20	6 a.m.	29.35	29	Strong—ENE. Light—NNW. Moderate—NNE.	Cloudy.	
	12 n.	29.55	30	Moderate-NNE	Snew showers.	
	6 p.m.	29.55	32	Strong-northerly	Cloudy.	
27	12 in.	29.45	26 28	Moderate-NW	Snow squalls.	
	6 a.m.	29.50	28	Strong—westerly	Snow squalls.	
	12 n.	29.55	28	Strong-WNW	Snow squalls.	
	6 p.m.	29.55	24	Strong-WSW	Clear.	
28	12 m.	29.45	24	Light-WSW	Cloudy.	
	6 a.m.	29.30	26	Light-SE	Cloudy.	
	12 n.	29.30	30	Calm	Cloudy.	
00	6 p.m.	29·15 29·10	36 32	Light SE	Cloudy.	
29	12 m. 6 a.m.	29.10	35	Colm	Light aport	
	12 n.	29.10	34	Light_WSW	Light snow	
	6 p.m.	29.15	34	Light-SW.	Cloudy	
30	12 m.	28.95	39	Strong—northerly. Moderate—NW Strong—westerly. Strong—WSW Light—WSW Light—WSW Light—SE Calm Light—SE Light—SE Light—SE Light—SE Light—SE Light—WSW Light—WSW Light—SW Light—SW Light—SW	Snow.	
	6 a.m.	28.65	39	Light-NE	Q <sub>m</sub> over	
	12 n.	28.60	38	Strong-westerly	Snow squalls	
	6 p.m.	28.55	38	Strong—westerly	Snow squalls.	
31	12 m.	28.25	30	Strong-WNW	Snow squalls.	
	6 a.m.	28.20	30	Strong—westerly	Show squalls.	
	12 n.	28-40	36	Strong—northerly	Cloudy.	
	6 p.m.	28.75	34			
ov. 1	12 m.	28.85	27	Strong—WNW. Strong—NW. Strong—NW. Strong—WSW. Moderate—WSW.	Clear.	
	6 a.m.	28.90	30	Strong-NW	Snow showers.	
	12 n.	29.00	30	Strong-WSW	Cloudy—snow showers.	
0	6 p.m.	29.00	30	Light SE	Cloudy.	
2	12 m. 6 a.m.	28·90 28·80	30	Light-SE	Cloudy.	
	0 a.m. 12 n.	28.80	32 32	Colm	Snow squalls.	
	6 p.m.	28.80	30	Calm. Moderate—WSW	Cloudy.	
3	0 p.m. 12 m.	28.85	30	Calm.	Thick snow.	
0	6 a.m.	28.90	30	Variable winds	Cloudy-onor	
	12 n.	29.00	39	Variable winds	Cloar	
	6 p.m.	29.00	34	Strong—ENE. Light—ESE. Light—ESE.	Cloudy	
4	12 m.	29.25	32	Light—ESE	Cloudy	
2	6 a.m.	29.25	32	Light—SE.	Cloudy.	
	12 n.	29.10	32	Moderate—SE	Cloudy. Clear.	
	6 p.m.	29.00	32 38	Gale—SSE.	Snow	
5	12 m.	28.80	32	Strong-SE	Snow. Snow. Snow.	
0	6 a.m.	28.65	34	Gale—ESE	Chow.	
	12 n.	28.50	36	Gale—ESE	Snow.	

Da	te	Time	Barome- ter	Ther- mometer	Direction, etc., of wind	Weather	Position .
						~	
Nov.	6	12 m.	28.35	34	Gale—ESE	Snow.	
		6 a.m.	28.35	34	Gale—SE	Snow—rain.	
		12 n.	28.45	36	Gale—SE	Snow.	
		6 p.m.	28.55	36	Strong breeze-ESE	Cloudy.	
	7	12 m.	28.70	38	Strong breeze—easterly.	Cloudy.	
		6 a.m.	28.80	36	Moderate—ESE	Showery. Cloudy.	
		12 n.	28.90	38	Light-SE	Clear.	
		6 p.m.	29.00	37 35	Light—easterly Strong—ENE	Snow until 4 a.m.	
	8	12 m.	29.10	34	Moderate—ENE	Rain—foggy	Left Button islands 7.15
		6 a.m.	29·10 29·10	34	Moderate—ENE	Foggy.	a.m.
		12 n.	28.95	34	Strong-NE	Cloudy	Lat. 60.42 N., Long. 63.38
	9	6 p.m.	28.95	38	Moderate-NE.	Rain.	W.
	9	6 a.m.	29.00	40	Moderate—NE	Snow showers.	
		12 n.	29.05	42	Moderate-NE	Cloudy	Lat. 57.56 N., Long. 58.15
		6 p.m.	29.10	40	Moderate-ENE	Cloudy.	W
	10	12 m.	29.10	38	Strong-NE	Snow showers.	
	10	6 a.m.	29.10	40	Moderate-NNE	Cloudy.	
		12 n.	29.10	40	Moderate-NNE	Cloudy,	
		6 p.m.	29.20	36	Strong-North	Clear	Lat. 53.20 N., Long. 55.00
	11	12 m.	29.52	35	Strong-N	Clear.	W
		6 a.m.	29 - 62	27	Moderate-NW	Clear.	10 13 73 67 1 35 3 1
		12 n.	29-87	27	Light-NW	Clear	40 miles E. Great Mekat-
		6 p.m.	29.80	29	Moderate—W	Clear.	tina island, Gulf of St.
	12	12 m.	29.80	28	Light-NW	Cloudy.	Lawrence.
		6 a.m.	29.70	26	Light-NE	Cloudy.	30 miles E. Carousel light,
		12 n.	29.80	26	Light-N	Clear	Gulf of St. Lawrence.
		6 p.m.	29.48	28	Light—SW	Clear.	Gull of St. Lawrence.
	13		29.48	26	Moderate-WSW	Clear.	
		6 a.m.	29.55	30	Light—WSW	Cloudy	South end Hare island-
		12 n.	29.72	34	Light—WSW	Cloudy.	river St. Lawrence.
		6 p.m.	29.83	39	Light—WSW	Clear	
	14		29.85	36 32	Moderate—WSW	Cloudy	Left Grosse isle 6.30 a.m.
		6 a.m.	29·85 29·86	38	Moderate-W	Cloudy	Arrived Quebec 8.35 a.m.
		8 a.m.	28.86	38	MIOUETALE W	Carolina de la caroli	The state of the s
		1		1	1		

#### APPENDIX No. 9

#### ICE OBSERVATIONS

Ice observations were made from the ground, usually a hill, and from the air. Owing to adverse weather conditions and low visibility it was not always possible to obtain a view of the strait, consequently there are many dates on which no observations were recorded.

### BASE "B"—NOTTINGHAM ISLAND

November 16, 1927

First ice floes noticed off shore to the south. Cove completely frozen over for first time.

November 18, 1927

Open water about half a mile out.

November 23, 1927

Air Patrol No. B-10.

Route of patrol—circled base and east to Port de Boucherville.

Visibility at 2,000 feet about 20 miles.

About 15 miles of open water east of Port de Boucherville. Ice extends south from Cove towards Digges islands.

Distance covered—25 miles. Time in air—20 minutes.

November 24, 1927

Air Patrol No. B-11.

Route of Patrol-went around Nottingham island and patrolled in direction of Mill, Salisbury and Digges islands.

Visibility at 7,000 feet from 40 to 50 miles.

About 50 per cent cake floe ice and open water within range of visibility. Very little movement but clear water to east of Salisbury and Nottingham islands indicate a slight movement to southeast.

Distance covered—160 miles. Time in air—1 hr. 55 mins.

November 25, 1927

Air Patrol No. B-12.

Route of Patrol-followed the west coast of the island to the northwest corner then changed direction to the northeast and proceeded out in a line between Mill and Salisbury islands for about 15 miles, returning via west coast.

Visibility at 3,000 feet between west and northeast about 40 miles, between

west and southeast about 30 miles.

Loose floe ice for about 25 miles between Bell Peninsula and Nottingham island, with open stretch of water beyond this ice as far as visibility looking south. Loose floe ice in Fox channel between Bell Peninsula and Mill island as far as visibility and between Nottingham and Salisbury islands. Beyond Salisbury looking towards Dorset appears to be open water and also to the east of Salisbury appears to be open. No distance leads noticed.

Distance covered—100 miles. Time in air—1 hr. 15 mins.

November 26, 1927

Air Patrol No. B-13.

Route of patrol-took off from base and made one landing on lake and returned to Base.

Visibility at 1,500 feet about 20 miles.

Ice conditions the same as on November 25.

Distance covered—20 miles.

Time in air-20 minutes.

### November 28, 1927

Air Patrol No. B-14.

Route of Patrol—proceeded east to Port de Boucherville to northeast corner of Nottingham island then west for about 15 miles between Nottingham and Salisbury islands and returned to Base.

Visibility at 4,000 feet, to west and north very poor on account of low

clouds, to south and east about 20 miles.

From base around coast as far as patrolled there is open water for about 10 miles off coast dotted with occasional small patches of ice, beyond that floe ice as far as visibility.

Distance covered—80 miles.

Time in air-1 hour.

# November 29, 1927

Air Patrol No. B-15.

Route of patrol—proceeded up west coast of island to five miles off north end, cut across island to east end as channel between Nottingham and Salisbury was not visible for snow. Ran into snow at east end of island and returned to Base.

Visibility poor—see above.

Some open water a mile off east end, remainder about 60 per cent cake ice and 40 per cent water with no definite leads.

Distance covered—115 miles.

Time in air—1 hour 35 minutes.

### December 3, 1928

Visibility poor.

Open water a mile off shore.

#### December 4, 1927

Visibility about half a mile. No open water in sight.

### December 5, 1927

Visibility about a mile at times. Open water a mile off shore.

# December 6, 1927

Visibility at times reached a mile and a half mostly due to fog rising off open water about a half mile off shore.

#### December 8, 1927

Air Patrol No. B-16.

Route of Patrol—proceeded east then north to Barry rocks, turned inland, landed on lake, proceeded southwest to coast and then north to north end of the island, then east and south to south end and back to Base.

Visibility from 3,500 feet about 25 miles.

Twenty per cent open water 80 per cent ice north and west, 30 per cent water and 70 per cent ice southeast, 40 per cent water 60 per cent ice between Nottingham and Salisbury and east of there.

Distance covered—135 miles.

Time in air-1 hour 40 minutes.

December 9, 1927

Visibility about a mile at times—blizzard. No open water in sight.

December 11, 1927

Visibility about half a mile. No open water in sight.

December 12, 1927

Air Patrol No. B-17.

Route of Patrol—towards Diggs island for about 15 miles, turned and headed north following the east coast of Nottingham island about 15 miles from shore to the N.W. corner and returned down the west coast.

Visibility at 2,000 feet, clouds low and visibility to southwest and north only

fair about 20 miles. To the east poor—5 to 10 miles.

To the south, west and north ice is becoming packed and appears to be fairly heavy, also rough. No definite leads were noticed and the percentage of water only about five per cent. To the east of the island there is open water for about two miles from shore for about a mile beyond that, ice similar to that mentioned above.

Time in air-1 hour.

Distance covered—75 miles.

December 13, 1927

Air Patrol No. B-18.

Route of Patrol—northeast over Barry rocks until in sight of Salisbury island and back to Base.

Visibility from 1,500 feet—15 to 20 miles.

Forty per cent water 60 per cent ice between Salisbury and Nottingham, 30 per cent water 70 per cent ice east, 20 per cent water 80 per cent ice south hummocky, 10 per cent water west.

Distance covered—40 miles.

Time in air—25 minutes.

December 14, 1927

Air Patrol No. B-19.

Route of Patrol—Base to east coast out over Barry rocks until within good view of Salisbury island, then north for fifteen miles, thence south towards Diggs island until in good view of mainland, thence northwest until a point ten miles south of island and returned to Base.

Visibility exceptionally good—although clouds at about 2,500 feet.

To west south and east about 30 per cent water, 70 per cent ice, no definite leads, ice heavy and fairly smooth. To the north about 20 per cent water 80 per cent ice. A large body of open water between Nottingham and Salisbury islands.

Distance covered—110 miles.

Time in air—1 hour 15 minutes.

December 15, 1927

Air Patrol B—20.

Route of Patrol—started on No. 1 patrol southeast and arrived at a point five miles east of Erik Cove, turned west on coast and landed at Erik Cove. Took off to return to Nottingham. After flying over an hour decided had missed island and landed on ice to allow visibility to clear. Took off morning of 16th and proceeded northeast struck the corner at the north end of Nottingham island and followed coast line to Base.

About 30 per cent water, 70 per cent ice, no definite leads, considerable open water around Diggs island.

Distance covered—360 miles. Time in air-4 hours 30 minutes.

### December 16, 1927

Air Patrol B—21.

Route of Patrol—in search of aircraft "HJ"—proceeded towards Erik cove making a circle, followed channel between Nottingham and Salisbury islands, then down west coast of island to Base.

Visibility at first was fairly good but gradually became worse until finally

it was necessary to follow the coast line at a very low altitude.

About 70 per cent heavy floe ice, these floes joined together by a thin scum of ice, scarcely any open water within visibility of patrol.

Distance covered—175 miles. Time in air—2 hours 10 minutes.

### December 18, 1927

Visibility at times about two miles. No open water in sight.

### December 19, 1927

Visibility poor—low clouds. No open water visible.

# December 21, 1927

Air Patrol No. B-22.

Route of patrol—south towards Erik cove—first land sighted between Diggs island and Wolstenholme, then along coast and landed Erik Cove.
Visibility good for first half hour—then fog—had to come down to fifty

feet.

About 70 per cent ice and 30 per cent water between Nottingham and mainland. No definite leads. Considerable open water in the vicinity of Diggs island.

Distance covered 80 miles.

Time in air-1 hour.

### December 23, 1927

Air Patrol No. B-23.

Route of patrol-north from Erik cove to Nottingham-reached there

at Port de Boucherville, thence west to Base.

About 70 per cent ice and 30 per cent water between mainland and Nottingham. No definite leads. Most open water just off Erik Cove and considerable east of Nottingham island.

Distance covered—about 75 miles.

Time in air—55 minutes.

# December 24, 1927

Visibility about one mile. No open water in sight.

# December 25, 1927

Visibility fair.

No open water in sight.

December 26, 1927

Visibility about five miles. No open water.

December 27, 1927

Visibility about two miles—low clouds. Open water about a mile off shore.

December 28, 1927

Visibility about two miles at times. No open water visible.

December 29, 1927

Air Patrol No. B-24.

Route of Patrol—followed east coast of Nottingham past Port de Boucher-

ville and out towards Salisbury island, returning by same route.

Visibility at 3,000 ft. all around the island very poor. Sky clear immediately overhead but about five to seven miles off coast thick mist, which did not allow visibility more than a mile beyond that. This presumably caused by vapour rising off the open water which extended to the southwest, south and east of Nottingham island.

About 50 per cent water and 50 per cent ice. The channel between Nottingham and Salisbury islands is almost entirely blocked with ice, a very small

percentage of water noticeable.

Distance covered—70 miles. Time in air—50 minutes.

December 30, 1927

Air Patrol No. B-25.

Route of Patrol—overland towards north end of island for 20 miles, thence south to coast and around to point opposite Salisbury island and returned across Nottingham to Base.

Vapour at north end apparently from open water. A stretch of open water about four miles off south and east shore of Nottingham island was causing a cloud which obscured further visibility to south and east.

Time in air-1 hour 15 min. Distance covered-110 miles.

December 31, 1927

Visibility about two miles due to low mist. No open water in sight.

January 2, 1928

Visibility about a mile. No open water in sight. Depth of ice in fresh water lake 27 inches.

January 3, 1928

Visibility about a mile. No open water in sight. Depth of salt water ice in cove 21 inches.

January 4, 1928

Visibility about a mile. No open water in sight.

January 5, 1928

Visibility about 2 miles. No open water in sight.

January 6, 1928

Visibility about 2 miles. No open water in sight.

January 7, 1928

Visibility about a mile. No open water in sight.

January 8, 1928

Visibility about 5 miles. No open water in sight.

January 9, 1928

Air Patrol No. B-26. Test flight over Base.

Visibility poor from 2,000 feet owing to vapour rising off open water, to the south, west and north about 5 miles. To the east fog was hanging quite close to the shore and obscuring visibility in that direction.

Open water about 50 per cent and 50 per cent cake ice four miles to

south and west, west of Base as far as visibility.

Distance covered—40 miles. Time in air—30 minutes.

January 10, 1928

Visibility about 3 miles. No open water in sight.

January 11, 1928

Visibility about 2 miles. No open water in sight.

January 12, 1928

Air Patrol No. B-27

Route of patrol—south for ten miles—west to Barry Rock and return to Base.

Visibility at 3,000 feet 30 miles.

Very little open water between Salisbury and Nottingham islands. About 20 per cent open water and 80 per cent ice off east end of Nottingham and Salisbury. Remainder frozen over except a few small leads and holes.

Distance covered—70 miles. Time in air—50 minutes.

January 13, 1928

Visibility about one mile. No open water in sight.

January 14, 1928

Visibility about one mile. No open water in sight.

January 15, 1928

Visibility about one mile. No open water in sight.

January 16, 1928

Visibility about half a mile. No open water in sight.

January 17, 1928

Air Patrol No. B-28.

Route of Patrol—proceeded up west side of island for 15 minutes turned and followed coast line over Barry rocks and back overland to base.

Maximum visibility about 4 miles, but to east not much over one mile.

Open stretch of water fifty to hundred yards wide about two miles off shore from Port de Boucherville, around south and west of island as far as patrolled beyond which large pans of heavy floe ice, little water, no definite leads, about 80 per cent ice and 20 per cent water.

Distance covered—75 miles. Time in air—50 minutes.

January 18, 1928

Visibility about four miles. No open water in sight.

January 19, 1928

Visibility about two miles. No open water in sight.

January 20, 1928

Visibility about five miles. No open water in sight.

January 21, 1928

Visibility about four miles. No open water in sight.

January 22, 1928

Visibility about one mile. No open water in sight.

January 23, 1928

Visibility about half a mile. No open water in sight.

January 24, 1928

Visibility about half a mile. No open water in sight. Fresh water ice on lake 33 inches thick.

January 25, 1928

Air Patrol No. B-29.

Route of Patrol—proceeded northeast to Barry Rocks, followed coast up to North end of the island crossed to southwest shore and followed down to about five miles past south end and returned to base.

Visibility about ten miles to south and east and twenty miles to north and

west.

Not much open water, about 15 per cent between Nottingham and Salisbury islands and about 20 per cent open water and 80 per cent ice for about ten miles off southeast coast of Nottingham island, remainder frozen over with small pans and rough hummocky ice except a few open spots off north end and a couple of small leads about five miles off west shore.

Distance covered—110 miles. Time in air—1 hour 20 minutes.

# January 26, 1928

Visibility about two miles.

No open water in sight.

Depth of salt water ice on cove 31 inches. Depth of fresh water ice on lake 33 inches.

# January 27, 1928

Visibility about one and one-half mile.

No open water in sight.

### January 28, 1928

Visibility about six miles.

A little open water about 4 miles off shore just outside the pressure ridge on the ten fathom bar.

Slight movement of the ice to the westward.

## January 29, 1928

Visibility about one mile. No open water in sight.

# January 30, 1928

Visibility about two miles. No open water in sight.

### January 31, 1928

Air Patrol No. B-30.

Engine and ski test—climbed to 1,500 feet. Circled Base.

Visibility about five miles.

A ten mile lead of open water about half a mile wide off west shore.

Distance covered—35 miles.

Time in air—25 minutes.

#### February 1, 1928

Visibility about two miles.

No open water in sight.

Depth of salt water ice on cove 35 inches. Depth of fresh water ice on lake 35 inches.

#### February 2, 1928

Visibility about three miles.

No open water in sight.

### February 3, 1928

Visibility about four miles.

No open water in sight.

#### February 4, 1928

Air Patrol No. B-31.

Route of Patrol—around south and east coast to between Nottingham and Salisbury islands and back to Base.

Visibility at 5,000 feet about 20 miles.

Ice broken up into small pans from about two miles off south and east shore to as far as visibility with about 20 per cent water and 80 per cent ice. Same conditions exist between Nottingham and Salisbury islands.

Distance covered—100 miles.

Time in air—1 hour 15 mins.

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# February 5, 1928

Visibility about five miles.

Land floe and ice pack. No open water in sight.

# February 6, 1928

Visibility about half a mile.

Land floe ice only. No open water in sight.

# February 7, 1928

Visibility about two miles.

Only land floe ice in sight, no open water.

# February 8, 1928

Visibility about four miles.

Land floe and ice pack as far as visibility. No open water in sight.

### February 9, 1928

Visibility about seven miles.

A few small leads of water off south point between land floe and ice pack. Slight movement of ice pack to westward.

# February 10, 1928

Visibility about a mile.

Only land floe ice in sight.

## February 11, 1928

Visibility about six miles.

Only land floe and ice pack with a few small leads in sight to southwest.

### February 12, 1928

Visibility about a mile.

Land floe as far as visibility, no open water.

#### February 13, 1928

Visibility about two miles.

Only land floe in sight. No open water.

#### February 14, 1928

Visibility about a mile.

No open water in sight. Only land floe.

#### February 15, 1928

Visibility about a mile.

Only land floe in sight.

Depth of salt water ice in cove 39 inches. Depth of fresh water ice on lake 42 inches.

# February 16, 1928

Visibility about five miles.

Land floe and ice pack. A few small leads about three miles off shore.

#### February 17, 1928

Air Patrol No. B-32.

Route of Patrol—proceeded northwest until a point about seven miles past northwest corner of Nottingham island. Turned and followed coast line of island about five miles off shore.

Visibility at 4-5000 feet—35 miles.

Ice pack extending as far as visibility with very small percentage of open water here and there, most open water noticeable off southwest corner of Nottingham island. No definite leads were noticed and looking up Fox channel from northwest corner of Nottingham island no open water at all was visible. The channel between Salisbury and Nottingham is also entirely blocked with ice. A cloud of vapour appeared to be rising off a large body of open water to the northwest of Diggs islands but water was not visible.

Distance covered—100 miles. Time in air—1 hour 20 minutes.

# February 18, 1928

Air Patrol No. B-33.

Special flight to Wakeham Bay on way to Port Burwell to assist in search

for missing aircraft with Messrs. Lewis and Terry and Eskimo.

Route of Patrol—Nottingham island to mainland—five miles east of Erik Cove, following coast line to half way between Sugluk and Weggs islands, crossed overland to south end of King George sound, thence to Fisher Bay and Wakeham Bay.

Visibility at 5,000 feet about 20 miles.

About 30 per cent open water flown over 70 per cent pan ice, most of the pans too small and rough to land on. Very little land floe along mainland except in vicinity of Sugluk inlet where it extended about three miles off shore.

Distance covered—250 miles. Time in air—2 hours 45 minutes.

# March 6, 1928

Air Patrol No. B-38.

Route of Patrol—Made a circuit of the southwest corner of the island 7-8 miles off shore as far as Port de Boucherville and about 10 miles up west side of island.

Visibility except to north good.

Large patch of open water just off Barry rocks and extending along northeast coast line of Nottingham island also large patch of open water visible in vicinity of mainland and Diggs islands. Remainder of strait within visibility almost entirely frozen over with pack ice which appears to be very rough and hummocky. No leads were observed.

Distance covered—75 miles. Time in air—55 minutes.

# March 24, 1928

Air Patrol No. B-39.

Route of Patrol—returning to Nottingham island—To south end of King George's sound, followed coast to point south of Weggs island then across land to Sugluk inlet and to Erik Cove—to Nottingham island.

Visibility at 5,000 ft. about 15 miles.

Considerable open water in vicinity of Weggs island and about 30 per cent open water between Sugluk and Erik Cove. About 15 per cent to 20 per cent open water between Erik Cove and Nottingham island.

Distance covered—250 miles. Time in air—3 hrs. 15 mins.

# March 25, 1928

Visibility about 10 miles.

Land floe and ice pack. No open water.

Salt ice 47 in. Fresh water ice 47 in.

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March 26, 1928

Visibility about 2 miles.

Land floe and ice pack no open water in sight.

March 27, 1928

Visibility about 15 miles.

Land floe and ice pack as far as south point of island. Then open water for about a mile in width and ice pack beyond as får as visibility.

March 28, 1928

Visibility about a mile.

Land floe and ice pack as far as visibility.

March 29, 1928

Visibility about 40 miles—mainland could be seen.

Land floe averages about two miles, ice pack beyond broken with small leads and considerable water off southeast end of island.

March 30, 1928

Visibility about 10 miles.

Land floe and ice pack. Clouds indicate considerable open water further out, a lead of about one-half mile in width is visible about three miles off south east end of island.

March 31, 1928

Air Patrol B-41.

Route of patrol—headed out and passed over Port be Boucherville and out over Barry rocks to a point half way between Nottingham and Salisbury islands, turned and followed coast of Nottingham ten miles off shore around south point of island to a point about half way between southwest corner and northwest corner of island, turned inland and returned to Base over island.

Visibility from 7,500 feet about fifty miles.

Land floe averages one to two miles from shore then pack ice, pans of which are very small and hummocky with small holes of water here and there, approximately 85 per cent ice and 15 per cent water. This condition extends all around within range of visibility with the exception of the southwest corner of Nottingham island where ice pack has broken away from the land floe and open water extends for about six or seven miles and about four miles in width. In Fox channel very little open water visible.

Distance covered, 100 miles.

Time in air, 1 hour and 15 minutes.

April 1, 1928

Visibility about seven miles.

Land floe with about two mile lead of open water off southwest shore and ice pack beyond.

April 2, 1928

Visibility about two miles.

Only land floe and ice pack in sight.

April 3, 1928

Visibility about four miles.

No open water in sight only land floe and ice pack.

April 5, 1928

Visibility about two miles.

Land floe and ice pack. No open water in sight.

April 6, 1928

Visibility about three miles.

Land floe and ice pack, no open water in sight.

April 7, 1928

Air patrol B-42.

Route of patrol—proceeded toward southeast end of island, to Port de Boucherville and return to Base.

Visibility from 5,000 feet about 15 miles.

About two miles of open water off southeast end of island beyond this small pan ice with about 30 per cent water to west and southwest about 10 per cent open water beyond land floe and ice pack which extends two or three miles from shore.

Distance covered—40 miles.

Time in air—30 minutes.

April 8, 1928

Visibility about three miles.

Land floe and ice pack as far as visibility.

April 9, 1928

Visibility about three miles.

Land floe and ice pack as far as visibility.

April 10, 1928, to April 13

Air Patrol No.—B-43.

Route of Patrol—from Nottingham island to Erik Cove and return.

Visibility on 10th April, fifty to sixty miles.

About 80 per cent small pan and rough cake ice between Nottingham and Erik Cove with 20 per cent open water and small leads. Passage blocked between Wolstenholme and Diggs islands. About three miles south of Diggs there was about six miles of open water.

Visibility on 13th April, five to ten miles.

About 80 per cent small pan rough cake ice 20 per cent water. One-half mile open water outside Erik Cove and Diggs. Two miles open water off southeast end of Nottinghom.

Distance covered—200 miles.

Time in air—2 hours, 15 minutes.

April 14, 1928

Visibility about a mile.

Only land floe and ice pack in sight.

April 15, 1928

Visibility about four miles.

Land floe and ice pack with small leads about two miles off shore.

April 16, 1928

Visibility about six miles.

No open water in sight. Land floe and ice pack.

April 17, 1928

Visibility about six miles.

Land floe and ice pack for about two miles, open water beyond as far as horizon.

April 18, 1928

Air Patrol No. B-44.

Route of Patrol—from Base to Port de Boucherville, then made a circuit of southwest corner of the island and up west side of the island about ten miles off shore to a point about five miles past Trainor reef turned and back to base over island.

Visibility—to the east and south 15 miles, to west 25 miles and to north 20

miles—from 4,500 feet.

To east about 15 per cent water and 85 per cent ice. Off southwest corner of the and extending as far as the northwest corner of the island there was a stretch of open water averaging from 2 to 10 miles wide from 2 to 3 miles off shore beyond that 25 per cent water 75 per cent ice. Channel between Nottingham and Salisbury entirely blocked with ice.

Distance covered—125 miles.

Time in air—1 hour, 25 minutes.

April 19, 1928

Visibility about six miles.

Land floe and ice pack with a small lead of open water about three miles off shore.

April 20, 1928

Visibility about four miles.

Land floe and ice pack with a lead of open water about a mile wide two miles off shore.

April 21, 1928

Air Patrol B—45.

Route of Patrol—proceeded northwest as far as Trainor Reef then northeast to north end of Salisbury island. Followed shore line of Salisbury to southwest corner and then crossed to Nottingham and to Base.

Visibility from 3,000 feet about 20 miles.

About 85 per cent rough pan ice and 15 per cent open water without definite leads in Fox channel as far as visibility. About a mile open water off northwest end of Salisbury. Leads about half a mile wide extending along most of southwest side of Nottingham and Salisbury. To south and east about 80 per cent rough pan ice and 20 per cent open water.

Distance covered—180 miles.

Time in air—2 hours 10 minutes.

April 22, 1928

Visibility about seven miles.

Land floe and ice pack with a few small leads two and three miles off shore.

April 23, 1928

Visibility about five miles.

Land floe and ice pack with small leads about two miles off shore.

April 24, 1928

Visibility about five miles.

Land floe and ice pack extending about two miles beyond this about two miles of open water.

April 25, 1928

Visibility about eight miles.

Land floe and ice pack for about two miles, beyond this two to three miles of open water.

April 26, 1928

Air Patrol No. B-46.

Route of Patrol—proceeded south to a point about half way between Nottingham and Diggs, then northeast to a point half way between northeast corner of Nottingham and Salisbury island, then across Nottingham and down west coast to Base.

Visibility from 3,500 feet to east, south and west about thirty-five miles.

Heavy clouds to north and between Nottingham and Salisbury.

All around within range of visibility approximately 85 per cent ice and 15 per cent open water with the exception of northeast corner of Nottingham where there was a stretch of open water three to four miles square about one half mile from shore. No definite leads were observed.

Distance covered—115 miles. Time in air—1 hour 35 minutes.

April 27, 1928

Visibility about three miles.

Land floe and ice pack. No open water in sight.

April 28, 1298

Visibility about two miles. Land floe and ice pack.

April 29, 1928

Visibility about a mile.

Fresh water ice 51 inches thick—salt water ice 53 inches thick.

April 30, 1928

Air Patrol No. B-47.

Practice flight—circling base.

Visibility about 20 miles from 2,000 feet.

About a mile of open water between land floe and ice pack off southeast end of island. Very little open water beyond this.

Distance covered—40 miles.

Time in air—35 minutes.

May 1, 1928

Air Patrol No. B-48.

Route of Patrol—headed up west shore of Nottingham to Trainor reef, then northeast towards Mill then east, past southwest corner of Salisbury, followed channel between Nottingham and Salisbury and return to Base down east coast of Nottingham.

Visibility to west and north from 6,000 feet exceptionally good, mainland near Cape Dorset in clear view, to south and east visibility poor owing to low

clouds.

Stretch of open water running parallel with west coast of Nottingham from southwest corner to northwest corner of island about two miles from shore and about three to six miles in width. Beyond this to west and north 10 per cent water and 90 per cent small pan ice which appears to be very rough and hummocky. A few small patches of open water observed between Mill and Cape Dorset, and open water approximately a mile wide all long south shore of Salisbury, remainder of channel pretty well blocked with pan ice. To the east and south of Nottingham about 85 per cent of ice and 15 per cent open water as far as visibility.

Distance covered—110 miles. Time in air—1 hour 30 minutes. May 2, 1928

Visibility about six miles.

Two to three miles of open water between land floe and ice pack.

May 3, 1928

Visibility about two miles. Land floe and ice pack.

May 4, 1928

Visibility about half a mile. Only land floe ice in sight.

May 5, 1928

Visibility about six miles.

A few small leads between land floe and ice pack.

May 6, 1928

Visibility about ten miles.

Lead about half a mile wide to southeast between land floe and ice pack.

May 7, 1928

Air Patrol No. B-49.

Route of Patrol—south about ten miles then northeast and circled island and back to Base.

Visibility forty to fifty miles from 6,000 feet.

Field and ice pack to north and east with about 10 per cent water. Ice pack hummocky ice and small pan to south and west with about 30 per cent water. A lead about three miles wide off southeast end of island between land floe and ice pack. A lead about a quarter of a mile wide and three miles long about half way up west side of island extending southwest.

Distance covered—240 miles.

Time in air—3 hours.

May 8, 1928

Air Patrol No. B—50.

Practice flight and flight to meet Sq. Leader Lawrence coming from Wakeham Bay.

Visibility good to north, south and east, fair to the west.

About 25 per cent open water 75 per cent loose pack ice, no open leads, east of Nottingham. Channel between Nottingham and Salisbury almost entirely blocked with ice. To the West and North very little open water noticeable.

Distance covered—65 miles.

Time in air—50 minutes.

May 9, 1928

Visibility about ten miles.

A few small leads between land floe and ice pack.

May 10, 1928

Air Patrol No. B-51.

Routes of Patrol—proceeded to northwest end of island, returned down west coast and landed on lake for twenty minutes—then returned to Base.

Visibility about 15 miles to west and south, five to ten miles to north and

east.

A few small leads observed and about 15 per cent water to west, 30 per cent water to the east. Ice pack small pan and hummocky ice.

Distance covered—120 miles. Time in air-1 hour 35 minutes.

### May 11, 1928

Visibility about 25 miles.

Land floe extending a mile to two miles beyond this open water as far as visibility with only a few cakes of ice.

### May 12, 1928

Visibility about 25 miles.

Land floe extending one to two miles beyond this open water with a few small floes and cakes moving eastward. Ice to south on horizon.

#### May 13, 1928

Visibility about 20 miles. Land floe extending one to two miles. Lead about three to four miles wide to southwest beyond this ice field.

### May 14, 1928

Visibility about four miles.

Land floe and ice pack with small lead.

### May 15, 1928

Visibility about one mile. Only land floe ice in sight.

# May 16, 1928

Visibility about ten miles.

Land floe and ice pack with a few small leads to southwest.

# May 17, 1928

Air Patrol No. B-52.

Route of Patrol—south and east from Base, test flight.

Visibility to north and west ten to fifteen miles, to southeast thirty to forty miles.

Lead of open water two to five miles wide off southeast end of island. Ice pack to south and east with small pan and hummocky ice and about 30 per cent water. Only about 10 per cent open water to north and west. Lead about three miles wide and eight miles long to east of Salisbury island.

Distance covered—45 miles. Time in air—40 minutes.

# May 18, 1928

Air patrols Nos. B-53 and B-54.

Route of B-53—circled Base—weather unfavourable to cross to Erik Cove.

Route of B-54—crossed to Erik cove and return.

Visibility from 900 feet—40 to 50 miles.

Ice field consisting of small and medium pan and hummocky ice with about 30 per cent water between Nottingham and Erik Cove. A lead from two to ten miles wide between ice pack and land floe at mainland and outside of Diggs islands.

Distance covered—110 miles. Time in air-1 hour 35 minutes.

# May 19, 1928

Visibility about two miles.

Only land floe and ice pack in sight.

May 20, 1928

Visibility about ten miles.

Land floe and ice pack with a few small leads.

May 21, 1928

Visibility about 30 miles to southeast.

Land floe and ice pack. No open water in sight.

May 22, 1928

Air Patrol No. B-55.

Route of Patrol—up west side of island, crossed to north corner and out towards Mill island, came down north side of island, then across island to Base.

Visibility to north was 30 to 40 miles. Other directions cloudy.

Ice pack consisting of small and medium pan with about 15 per cent water and a few leads towards Bell Peninsula. Ice pack and about 20 per cent water to west and south. Leads two to ten miles wide east of Salisbury and Nottingham.

Distance covered—240 miles.

Time in air-3 hours.

May 23, 1928

Air patrol No. B-56.

Route of Patrol—crossed strait to Erik Cove, then west about 20 miles, then northeast to south coast of island, and back to Base.

Visibility about 30 miles to north.

Between Nottingham and Diggs—ice pack consisting of small pan and hummocky ice with about 20 per cent water and a few leads. No open water between Diggs and mainland. Triangular lead about 12 miles each side off east end of Nottingham. Ice pack to east consisting of small pan and about 30 per cent water.

Distance covered—160 miles.

Time in air—2 hours.

May 24, 1928

Visibility about forty miles.

Land floe and ice pack with a few small leads.

 $May\ 25,\ 1928$ 

Visibility about 40 miles.

Leads two to five miles wide between land floe and ice pack off west side of island.

May 26, 1928

Air Patrol No. B-57.

Circled base and forced to return by fog drifting over.

Visibility at times 20 miles.

Leads two to ten miles wide off west side of island, between land floe and ice pack.

Distance covered—10 miles.

Time in air—10 minutes.

May 27, 1928

Visibility about 40 miles southeast.

Several leads in ice pack to southwest. Pack moving southeast about 5 m. p. h.

### May 28, 1928

Visibility about 30 miles.

Leads about half a mile wide between land floe and ice pack off southwest shore. Few small leads farther out with a little movement to pack in westerly direction. A little rafting.

# May 29, 1928

Air Patrol No. B-58.

Route of Patrol—along south and west sides of Nottingham and towards Wolstenholme.

Visibility from 5,000 to 6,000 feet 60 to 70 miles.

South half of strait between Nottingham and Wolstenholme open for about 25 miles in width, closing in towards south end of Diggs islands. Ice pack between Diggs and mainland. About 40 per cent open water in strait as far as visibility. Ice pack with about 15 per cent open water to west. Very little water towards Fox channel and between Nottingham and Salisbury. Leads about two miles long and five miles wide off north and west end of Nottingham and Salisbury.

Distance covered—130 miles. Time in air—1 hour 40 minutes.

# May 30, 1928

Air Patrol No. B-59.

Route of patrol—all around island.

Visibility 15 to 20 miles southwest from 1,000 feet. Fog and low clouds to north and east.

Ice conditions similar to those of the 29th instant—Patrol No. B-58.

Distance covered—100 miles. Time in air—1 hour, 20 minutes.

# May 31, 1928

Visibility 15 to 20 miles at times.

Land floe and ice pack with a few small leads to southwest.

#### June 1, 1928

Visibility about 10 miles.

Lead about a mile wide to southwest between land floe and ice pack. Few small leads further out.

# June 2, 1928

Visibility about 50 miles.

Land floe broken off close to west shore of island. Lead about a mile wide between land floe and ice pack which extends about twenty miles south. Open water towards Diggs islands. A few leads to southwest.

# June 3, 1928

Visibility about 50 miles.

Leads about two miles wide off south and west shore. Ice pack towards Diggs and Wolstenholme with few leads.

# June 4, 1928

Visibility about six miles.

Lead one to three miles wide off southwest shore of island. Ice moving eastward about 4 m.p.h.

#### June-5, 1928

Visibility about 15 miles in morning. Some fog in afternoon.

Ice pack against south shore of island and about five miles along west shore to west beyond this open lead as far as visibility.

# June 6, 1928

Visibility about 50 miles.

Running abroad ice 10 to 15 miles south and west. Ice pack with a few small leads beyond this.

#### June 7, 1928

Visibility about 20 miles.

Lead off southwest end of island 10 miles wide to five miles wide to southwest. Ice pack with a few leads beyond.

# June 8, 1928

Visibility about 15 miles.

Running abroad ice for about five miles south and west. Ice pack beyond with a few leads, as far as visibility.

#### June 9, 1928

Visibility about 20 miles.

Running abroad ice five to ten miles west and south. Ice pack beyond.

#### June 10, 1928

Visibility about 20 miles.

Running abroad ice for about ten miles south and west. Ice pack beyond.

#### June 11, 1928

Visibility about 15 miles.

Running abroad ice five to ten miles south and west. Floe beyond with several leads.

### June 12, 1928

Visibility about 30 miles.

Running abroad ice for about five miles south and west. Ice beyond with several leads.

#### June 13, 1928

Visibility about 20 miles.

Ice pack to south and west with several leads to west.

#### June 14, 1928

Visibility about 30 miles.

Running abroad ice for about five miles south and west.

#### June 15, 1928

Visibility about 20 miles.

Running abroad ice and small floe for five to ten miles. Lead beyond five to ten miles wide to south. Ice pack to west.

#### June 16, 1928

Visibility about a mile or two at times. Fog most of day. Ice pack as far as visibility.

#### June 17, 1928

Visibility 30 to 40 miles.

Running abroad ice for about thirty miles. Ice pack to west beyond.

June 18, 1928

Visibility 30 to 40 miles.

Running abroad ice with large leads to south. Floe with some pan to west.

June 19, 1928

Running abroad ice. Large leads to southwest, closer to west and south.

June 20, 1928

Visibility about 30 miles.

Some small cake ice and running abroad ice. Floe ice to west. About 70 per cent water as far as visibility.

June 21, 1928

Visibility 30 miles. Heavy fog in morning.

Running abroad ice and about 60 per cent open water. Floe closer towards west. Shore ice in cove started to move out.

June 22, 1928

Visibility 30 to 40 miles.

Considerable movement to ice on cove, average thickness of cakes about a foot.

June 23, 1928

Visibility about 40 miles.

Running abroad ice and about 80 per cent open water as far as visibility. Ice a little closer towards Wolstenholme.

June 24, 1928

Visibility 15 to 20 miles. Fog part of day.

Running abroad ice and about 70 per cent open water.

June 25, 1928

Visibility 30 to 40 miles.

Running abroad ice and about 80 per cent open water. Cove open all way across, but ice at top and mouth moving back and forth.

June 27, 1928

Visibility about 40 miles.

Running abroad ice and about 90 per cent open water. Most of ice towards Wolstenholme.

June 28, 1928

Visibility about 40 miles.

Running abroad ice and about 70 per cent open water. Floe close towards Wolstenholme.

June 29, 1928

Visibility about 30 miles.

Ice close between Nottingham and Wolstenholme. Entirely open to west. Cove free of ice.

June 30, 1928

Visibility about 20 miles.

Running abroad ice and about 80 per cent open water. Ice closer between Nottingham and Wolstenholme due to wind direction.

July 1, 1928

Visibility about 30 miles.

Running abroad ice and about 70 per cent open water. Ice closest towards Northwest.

July 2, 1928

Air Patrol No. B-60.

Route of Patrol—south towards Cape Wolstenholme, then about half way up west side of Nottingham and crossed to Salisbury island and returned to Base.

Visibility from 5,000 feet about 60 miles.

About 10 per cent small cake and 90 per cent open water between Wolstenholme and Nottingham. Clear of ice inside and outside of Diggs islands. Thirty per cent small cake and 70 per cent open water to northwest of Nottingham. Ten per cent small cake in south half of the strait towards Charles island 40 per cent running abroad ice between Nottingham and Salisbury same between Mill and Salisbury. Thirty per cent running abroad ice and 70 per cent water between Salisbury and Cape Dorset.

Distance covered—160 miles.

Time in air—2 hours.

July 3, 1928

Air Patrol No. B-61.

Route of Patrol—northeast towards Cape Dorset. Tried to locate Post without success. Coast line very different from maps. Followed coast line from Gordon Bay to north of Mill island and flew south over Mill, Salisbury and Nottingham islands until in sight of Diggs islands and return to Base.

Visibility from 3,000 feet—about 50 miles.

Ice conditions—similar to that reported in Patrol No. B-60.

Distance covered—230 miles.

Time in air—3 hours 30 minutes.

July 4, 1928

Visibility about 40 miles.

Ice cakes drifted into the cove last night with change of wind and tide. Ten per cent cake ice to south 30 per cent to northwest.

July 5, 1928

Visibility 40 to 50 miles.

Ice pans in cove preventing take off. Five per cent small pan to south, ten per cent small pan to northwest, remainder open as far as visibility.

July 6, 1928

Visibility 40 to 50 miles.

Ice in cove preventing take off. Ten per cent small pan and ninety per cent open water. Clear towards Diggs islands and Wolstenholme. Ice in this vicinity appears to be coming around from between Nottingham and Salisbury.

July 7, 1928

Visibility about 20 miles.

Ice in cove preventing take off. About 10 per cent small pan and hummocky ice mostly close to east end of Nottingham. Cove cleared a bit with slight change of wind.

 $July\ 8,\ 1928$ 

Visibility about 30 miles.

Ice in cove preventing take off. Ten per cent small pan and hummocky ice close to Nottingham and northwest. Clear towards Wolstenholme.

July 9, 1928

Visibility 30 to 40 miles.

Ice in cove preventing take off. About 10 per cent small pan and hummocky ice in vicinity of Nottingham and northwest a little heavier.

July 10, 1928

Visibility 40 to 50 miles. Ice in cove preventing take off. Five per cent small pan and hummocky ice close to Nottingham. Clearer to northwest.

July 11, 1928

Visibility 40 to 50 miles.

Less than 5 per cent small pan and hummocky ice during the day.

Air Patrol No. B-62.

Route of Patrol—crossed strait to Erik Cove, thence along coast to Sugluk inlet, landed beside *Montcalm*, and returned same way.

Less than 2 per cent ice observed during flight mostly east of Salisbury.

Distance covered—210 miles.

Time in air—2 hours 50 minutes.

July 12, 1928

Visibility 40 to 50 miles.

Ice in cove preventing take off. Patrolled outside with motor boat and found ice conditions similar around island as reported on July 11.

July 13, 1928

Visibility on ground 15 to 20 miles.

Very little ice in sight mostly cakes stranded on shore and held in coves by wind.

Air Patrol No. B-63.

Route of Patrol—south towards Diggs islands for about 20 miles turned northeast to southeast corner of Salisbury island, then crossed to Nottingham and returned to Base via East coast.

Visibility from 2,500 feet about 15 miles, hazy all around.

The only ice observed was a small floe extending for about five miles east of Salisbury island, this ice being well scattered.

Distance covered—110 miles.

Time in air—1 hour 25 minutes.

July 16, 1928

Air Patrol No. B-64.

Route of Patrol—proceeded out towards southeast corner of Salisbury, then towards Diggs islands and return to Base.

Visibility from 2,500 feet, ten to fifteen miles.

No ice observed during patrol except in coves along west coast of Nottingham island.

Distance covered—125 miles.

Time in air—1 hour 40 minutes.

July 18, 1928

Air Patrol No. B-65.

Route of Patrol—proceeded towards channel between Nottingham and Salisbury, and northwest to north end of Mill island.

Visibility from 4,000 feet about 80 miles.

A little small pan and hummocky ice between Nottingham and Salisbury. Twenty per cent west of Trinity islands and the same north of Sea Horse Point. No ice west, south or east of Nottingham.

Distance covered—280 miles. Time in air—3 hours 30 minutes.

July 19, 1928

Air Patrol No. B-66.

July 21, 1928

Air Patrol No. B-67.

July 28, 1928

Air Patrol No. B-68.

July 30, 1928

Air Patrol No. B-69.

July 31, 1928

Air Patrol No. B-70.

August 1, 1928

Air Patrol No. B-71.

August 2, 1928

Air Patrol No. B-72.

August 3, 1928

Air Patrol No. B-73.

August 12, 1928

Air Patrol No. B-74.

August 15, 1928

Air Patrol No. B-75.

From July 19 to August 15, 1928, Air Patrols Nos. B-66 to B-75 were carried out and no ice was observed between Nottingham island and Cape Wolstenholme. Ice, however, was observed to the northwest and west in the vicinity of Mill island, Bell island and in Evans Strait, and to the north on the western side of Fox channel.

It will be noted from the above that from ground and air observations no

ice was reported to the south and east of Nottingham island.

### BASE "C"—WAKEHAM BAY

Air Patrols were carried out from this base on September 30, October 4, 6, 7, 13, 25, 27, 28 and no ice was observed.

November 9, 1927

Small quantity of slob ice forming on shore at waters edge.

November 16, 1927

Slob ice now getting quite rough and deep on beach, forming in ridges and terraces one to two feet high.

November 23, 1927

Beach very rough and bay practically frozen over. No ice observed in straits.

November 24, 1297

Bay almost completely frozen over.

# November 26, 1927

Bay completely frozen over.

#### December 3, 1927

Observation from mountain top to-day reports field ice in sight to northeast. Slob ice and open water to the southeast and all open water between outerheadland at entrance to Bay and Wales island.

This is the first ice which has been seen in the straits from this base this winter, although of late, conditions for making ground observations have been poor and it is quite possible ice has been prevalent, and not been seen.

# December 12, 1927

Air Patrol No. C-25.

Route of patrol—north 25 miles—west 15 miles—south to base.

Visibility about 60 miles.

For a distance of approximately 15 miles from the south shore of the straits the straits was covered completely with slob ice, from a point beyond that to the north shore the straits was about 50 per cent slob ice and 50 per cent open water. No heavy ice observed.

Time in air—50 minutes. Distance covered—70 miles.

# December 13, 1927

Air Patrol No. C-27.

Route of Patrol—northwest 25 miles—southeast 30 miles, west to Base.

Visibility about 60 miles.

Whole area of straits for about 15 miles from south shore covered with slob ice, north of that about 50 per cent open water and 50 per cent slob ice. No heavy ice in sight.

Time in air—1 hour 20 minutes. Distance covered—100 miles.

# December 16, 1927

Air Patrol No. C-29.

Route of patrol—north to Wales island thence east to a point about ten miles east of Doctor's island and back to base.

Visibility 10 to 15 miles.

Over area of straits under observation slob ice only existed with almost no open water at all. No heavy ice seen and no leads existing.

Time in air—40 minutes.
Distance covered—60 miles.

# December 18, 1927

Very low visibility.

Observation from mountain reports slob and newly formed ice with considerable percentage of open water in sight in straits. No heavy ice in sight.

# December 19, 1927

Air Patrol No. C-30.

Route of patrol—northwest to Fisher Bay, along coast to near Cape Weggs, east in straits ten miles, southeast to entrance of bay and back to base.

Visibility good.

The ice in the area of the straits under observation was of pan formation light and level with many leads running in no definite direction except in the centre of straits where definite long wide leads extending east and west existed.

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At times the machine was flown at 200 feet altitude and with exception other than in the very close proximity of the coast was the ice, it is estimated, even heavy enough to land an aircraft on.

Time in air—2 hours.

Distance covered—140 miles.

#### December 20, 1927

Air Patrol No. C-32.

Route of Patrol—southeast to Cape Hopes Advance, west northwest to entrance to bay and return to base.

Visibility 10 to 60 miles.

The ice in the area of the straits under observation was of pan formation light and level with very little rafting. Many small leads existed running in no constant direction with the exception of the centre of the straits where long, wide definite leads existed running east and west.

### December 21, 1927

Air Patrol No. C-33.

Route of patrol—to entrance of straits and return—visibility poor.

That small area of ice which could be seen outside of the solid ice of the bay was floe ice with odd small leads.

Time in air—20 minutes.

Distance covered—25 miles.

### December 23, 1927

Air Patrol No. C-34.

Route of patrol—local—further patrol abandoned owing to poor visibility. Such area of ice as could be seen off the entrance to Wakeham Bay was pan formation and covered about 5 per cent of the area in view. The remainder was open water. No heavy ice was seen.

Time in air—30 minutes.

Distance covered—35 miles.

# December 24, 1927

Air Patrol No. C-35.

Route of patrol—base to Wales island, northwest to Weggs island, east to 35 miles off base and return.

Visibility 50 to 60 miles.

Over area of the straits under observation pan and floe ice existed. The proportion of ice and open water would I estimate be about 80 and 20 per cent respectively with no definite leads. Very little rafting was seen and no heavy ice.

Time in air—1 hour 30 minutes.

Distance covered—120 miles.

#### December 29, 1927

Air Patrol No. C-37.

Route of Patrol—south of Joy Bay—east for thirty-five miles, northwest to Wales island, south to base.

Visibility 25 to 40 miles.

The ice in the area under observation was of pan and floe formation and since last seen on December 24 has become heavier in appearance and has rafted considerably. Estimated about 10 per cent of this area open water but no definite leads.

Time in air—1 hour, 15 minutes.

Distance covered—100 miles.

# January 4, 1928

Air Patrol No. C-38.

Route of patrol northeast from base about ten miles off entrance to bay, south to Doctor's island, and return to base.

Visibility never more than 10 miles.

The ice observed appeared very light and it is considered new ice having a clear bluish colour and no snow on it. It is all broken and in slob formation. I would judge that the centre of the straits is for the most part open water, from which the prevailing fog and vapour is caused.

Time in air—40 minutes. Distance covered—60 miles.

# January 6, 1928

Air Patrol No. C-39.

Route of patrol—north to entrance to bay, west to Fisher bay, east to east end Doctor's island, southwest to base.

Visibility over straits poor, vapour rising, east and west good.

The ice which could be seen was of pan and slob formation, quite light and appeared new. Apart from land floe ice the area within view was about 50 per cent ice and 50 per cent water.

Time in air—50 minutes. Distance covered—70 miles.

# January 8, 9, and 17, 1928

Air Patrol No. C-40.

Route of Patrol, along coast towards Erik Cove, landed at Sugluk inlet, left Sugluk and landed at Little Sugluk, and return along coast to Base.

Visibility good until 20 miles from Erik Cove.

Ice conditions all along coast much the same with land floe ice, then ice of pan formation and strips of open water and floe ice commencing about one to two miles from shore. The floe ice grows noticeably heavier with more rafting action as one proceeds farther west. Many small leads exist but none of any size or definite direction. (Obs, made Jany. 8, 1928). Time in air—5 hours, 40 minutes.

Distance covered—430 miles.

# January 16, 1928 (and 17)

Air Patrol No. C-42.

Route of patrol—along coast to Little Sugluk, and return to base, searching for aircraft—(Sqdn. Leader Lawrence).

Visibility about 25 miles at times.

The ice conditions in the straits were as follows—within range of visibility along coast land floe ice and for short distance out practically a continuous lane of open water. From about one mile out was of pan and floe formation and appeared level and light. Consider open water along shore due to ice being shifted from coast by off-shore wind. No definite leads (Jany. 16).

January 17—visibility only fair.

Percentage of open water along coast much less than yesterday.

January 11, 1928

Captain King made trip to end of land floe outside entrance of Wakeham Bay, and reports as follows:—"Ice found very rough, in places rafted to a height of ten feet, but apparently all newly formed, and that within the last eight or ten days. It is judged that this ice becomes jammed on the land with the tide and wind, and gradually becomes thicker and eventually is forced into a vertical position. The thickness of the ice is from 6 to 12 inches and absence of all snow on it makes positive the fact that it is newly formed.

January 19, 1928

Captain King proceeded out to entrance of bay and reports that he found ice all changed from the 11th instant. All the heavy rafted ice is gone and as far as could be seen (35 to 40 miles) straits full of young level ice, with few leads of open water. Ice to the northeast of Wales island apparently heavier than elsewhere.

January 27, 1928

Air patrol No. C-43.

Route of patrol—north to entrance of bay, northwest for 20 miles, west 35 miles, southeast to base.

Visibility 20 to 40 miles.

Floe ice in straits practically all joined up and rafted. Very little open water except along coast and at edge of land floe ice. One outstanding lead about 12 miles long and one mile wide running east and west and located about 20 miles true north of Wales island.

Time in air-1 hour.

Distance covered—80 miles.

January 30, 1928

Ground observations show that the ice in the straits for about two miles from shore was of pan formation and considerably rafted. From west end of Doctor island to east end of Wales island existed a lead about a mile wide. Outside of this and continuing to range of visibility (10 to 18 miles) the straits were covered with heavy rafted floe ice. Centre of straits completely obscured by low clouds.

February 3, 1928

Air Patrol No. C-44.

Route of Patrol—north to west end Wales island, southeast thirty miles, west to base.

Visibility 20 to 40 miles.

Immediately outside the entrance to Wakeham Bay and as far out as a line east and west with Wales island the ice was about 50 per cent slob and 50 per cent new level ice, all of which was light. No open water. In the straits and outside of Wales island ice was light pan slightly rafted but in no place within visibility did it appear heavy. About 10 miles out and running east to west as far as could be seen were leads about 2 to 3 miles wide.

Time in air-1 hour.

Distance covered—80 miles.

February 5, 1928

Observation of ice in straits from mountain top reports considerable open water and pan ice in straits. No definite leads.

February 9, 1928

Only closely packed ice observed in straits.

February 12, 1928

Ground observation reports heavily rafted pack ice in straits with no open water.

February 13, 1928

Ground observations report a heavy haze existing over the straits and in that small area under observation to the north slightly rafted floe ice, with few small leads.

# February 15, 1928

Ground observations report that nearly all open water from outside of land floe ice to Wales island and to the north northeast. Floe ice to north northwest.

# February 16, 1928

Air Patrol No. C-46.

Route of patrol, north from base about 35 miles, southeast about 40 miles, south ten miles, west to base.

Visibility ten to forty miles.

For a few miles outside of the land floe ice pan ice existed. This was considerably broken up and rafted. Farther out in the strait the ice was heavier and of floe formation with no definite leads except one near the centre of the strait. This lead extended east and west as far as could be seen and as the visibility in its vicinity was very poor an estimate of its width could not be made. Outside of the lead above mentioned very little open water prevailed.

Time in air—1 hour 35 minutes. Distance covered—125 miles.

# February 18, 1928

Air Patrol No. C-47.

Route of patrol—east to 15 miles from Akpatok and return to base. On way to Port Burwell to search for missing aircraft, forced to return owing to poor

visibility in Ungava Bay.

The ice was of pan formation and was heavily rafted. Thirty per cent open water existed. Ice in the straits was of pack formation with only a few minor leads. About five square miles of open water lay a few miles east of Wales island.

Time in air—3 hours 25 minutes.

Distance covered—280 miles.

# February 19, 1928

Air Patrol No. C-49.

Route of patrol—southwest to vicinity of Omanek, northwest to Port Burwell.

To assist in search for missing aircraft from Base "A".

Visibility ten to 25 miles.

The ice in the straits was of pack nature, mostly pan with scattered portions extremely rough and hummocky. Very little water and no definite leads. In Ungava Bay the ice was very much broken up and hummocky and provided no pan or floe ice fit for affecting a landing if necessary. In this area about ten per cent open water. There appeared to be very little open water near the east coast of Ungava, and near Burwell ice was of heavier nature than in Ungava.

Time in air—3 hours 40 minutes.

Distance covered—340 miles.

# February 20, 1928

Ground observation of ice in straits reports no open water in sight. Fairly level floe ice in sight with occasional evidences of rafting.

# February 21, 1928

Constable Murray, R.C.M.P., returning from Sugluk, reports floe ice outside of land floe in straits and no open water.

# February 22, 1928

Ground observation reports no open water in sight in straits.

February 28, 1928

Over that area of the straits which could be seen from mountain top no open water was visible. Nature of ice hard to discern due to local conditions,

March 1, 1928

Ground observation from mountain reports visibility over straits 35 to 40 miles, lead of open water for about one mile west of east end of Wales island, extending easterly across mouth of entrance of bay and as far east as could be seen. Beyond this and to north in straits floe ice from just outside Wales island. On the horizon and to the north and northeast appeared conditions, judged to be open water and loose ice.

March 5, 1928

Ground observation of ice in straits as follows: lead of open water from about one mile west of east point of Wales island extending east until obscured by high land along coast. From E.N.E. to S.S.E. only a narrow strip of shore ice. Remainder open water with only a few strings of drifting ice as far as could be viewed using binoculars. To the north, N.N.E. and west of Wales island all ice in sight. Visibility from mountain 40 to 45 miles.

March 9, 1928

Air Patrol No. C-52.

Route of patrol—north to West island, southeast to Doctor island, north-west to Wales island, southeast to Doctor island, southwest to base.

Visibility 15 to 40 miles.

Two small leads only observed, one stretching for three miles east from east end of Wales island and the other stretching for five miles from east end of Doctor island. The whole remaining area consisted of land floe ice and heavy pack hummocky ice. The ice along shore very much rafted.

Time in air-1 hour.

Distance covered—80 miles.

March 10, 1928

Ground observation reports very little open water visible in straits. Visibility about 30 miles.

March 12, 1928

Ground observation reports no open water in sight. Vis. about 20 miles.

March 13, 1928

From a point around to NNE. no open water visible. From a point about ENE. around to SE. a strip of land floe ice probably 3 or 4 miles wide, then open water as far as could be seen to E. about 45 miles. To N. and N.W. visibility limited to 25 or 30 miles with floe and pack ice in sight.

March 14, 1928

Air Patrol Report No. B-39.

Aircraft (Leitch—Pilot) returning from Port Burwell to Wakeham Bay. Route of Patrol—south from Burwell to Omanek, west to south of Akpatok island, over south end Diana Bay, north of Dyke Head and Joy Bay to Wakeham Bay.

Part of ice conditions obscured by clouds. Land floe extends about two miles from shore off East coast of Ungava. Most of bay covered by small pan and about thirty per cent open water. Visibility above clouds 30 miles.

Time in air—3 hours 25 minutes.

Distance covered—292 miles.

### March 16, 1928

Ground observation reports ice conditions as follows: all closely packed ice to north and east which has appearance of being much rafted. Small lake of open water off east end of Wales island only open water in sight. Pack ice also visible to west and northwest.

Visibility from mountain 35 to 40 miles.

### March 19, 1928

Observation of ice conditions in straits reports no open water in sight.

#### March 20, 1928

Ground observation reports a lead of open water from east point of Wales island extending east as far as could be seen for land obstruction at east entrance to Wakeham Bay. This lead about four or five miles wide. From a point about ENE, around to SE, exists a narrow strip of land floe ice and off this and extending as far as could be seen, a lead of open water 5 to 10 miles wide. Closely packed and heavily rafted ice over remainder of straits under observation.

Visibility about 40 to 45 miles from mountain.

# March 24, 1928

Ground observation reports closely packed ice to north and as far east as could be seen. To southeast over Stuparts bay and Joy bay a small lead of open water extending eastward along coast. Hazy over straits.

Max. visibility 25-30 miles.

# March 27, 1928

Air Patrol No. C-54.

Route of patrol—north to west end Wales island, southeast five miles past Doctors island, north northwest fifteen miles off entrance of bay and return to base.

Visibility ten to twenty-five miles.

One small patch of open water observed at east end of Wales island. Heavy pack ice existed in all directions.

Time in air-1 hour.

Distance covered—80 miles.

### March 31, 1928

Ground observation taken from mountain reports large lead of open water extending eastwards from Joy and Stuparts bay. Remainder of straits full of closely packed ice.

Visibility from mountain about 35 miles.

## April 2, 1928

Air Patrol No. C-55.

Route of Patrol, across bay from base, northeast to entrance, circled entrance, then southwest to base, thence northeast to point off east end Wales island, east southeast for thirty miles, southwest 20 miles and return to base.

Visibility 20 to 25 miles.

Ice in straits very considerably broken up. There is now about 10 per cent open water. The pack is moving in a southeasterly direction.

Time in air—1 hour 40 minutes. Distance covered—140 miles.

# April 4, 1928

Air Patrol No. C-56.

Route of patrol, to Wales island and return.

Visibility to west 35 miles, to north 15 miles and to east 35 miles.

Ice in straits considerably broken up and about 15 per cent open water throughout the pack ice existed.

April 7, 1928

Ground observation reported visibility from mountain about 20 miles.

There existed only very little open water, a narrow lead off east end Wales island and a few small open areas in Stuparts and Joy bays.

April 8, 1928

Pack ice in straits with about 15 per cent water. No definite leads.

April 9, 1928

Condition unfit for observations of any extent in straits. Land floe and pack ice only in sight. Open water almost nil.

April 11, 1928

Ground observation reports a small lead of open water to the NNE of east headland at entrance to Bay approximately one half mile wide and two miles long. Another to east over Joy bay one to two miles wide and extending easterly along coast as far as could be seen. To the N. NNE around and off Wales island appeared closely packed ice and highly rafted. Ice to eastward too far distant to form opinion of its nature.

April 12, 1928

Air Patrol No. C-58.

Route of patrol—Southeast to Payne bay, and return to base.

Visibility about 40 miles.

Heavy packed ice observed in straits with open water towards the centre of straits and in vicinity of Joy Bay. Ice in Ungava Bay considerably broken up with approximately 20 per cent open water. Mouth of Payne Bay partly open at mouth.

Time in air—4 hours.

Distance covered—290 miles.

April 22, 1928

Air Patrol No. C-59.

Route of patrol, to Burgoyne Bay and return.

Searching for Sqd. Leader Lawrence returning from Burwell, overdue.

Visibility 35 miles.

Floe in straits with small leads for about ten miles from shore.

Time in air—1 hour, 10 minutes,

Distance covered—75 miles.

April 23, 1928

Ground observation reports little open water between east and Wales island and east headland of Bay entrance. Lead about 10 miles long and one mile wide to east over Stuparts bay. Ice in straits closely packed and heavily rafted.

April 26, 1928

Air Patrol No. C-60.

Route of patrol, north to entrance of bay, west to Douglas harbour, east to Neptune head, return to base.

Visibility in all directions 40 miles.

Ice in straits small percentage pan remainder fairly heavy broken and rafted ice fields. No open water except narrow strips along edge of land floe ice.

Time in air—1 hour, 15 minutes.

Distance covered—110 miles.

April 29, 1928

Air Patrol No. C-61.

Route of patrol, northeast to entrance of bay, west to Douglas harbour, east to Neptune Head, and return to base.

Visibility in all directions 50 miles.

Only about 5 per cent open water in straits most of which is along edge of land floe ice. Ice pan and pack about 40 per cent pan remainder heavy and well broken ice. Flying low over the ice it could be seen to stand 6 to 8 feet out of the water where broken.

Time in air—1 hour, 25 minutes. Distance covered—120 miles.

April 30, 1928

Ground observation report large lead open water off land floe ice and extending from east and Wales island across entrance to bay. This lead estimated 10 to 12 miles wide. Small areas of open water observed in the direction of Stupart's bay and Joy bay. Ice in straits appears to be of pan formation and loose.

May 1, 1928

No open water in sight in straits of which only a small area was visible.

May 2, 1928

Ground observation, pack ice only in sight, one lead of open water extending from east end Wales island northeasterly as far as visibility, 25-30 miles. This lead was about five miles wide at end near Wales island gradually tapering away into the distance, when seen at 9 a.m. When seen at 4 p.m. it had closed in and only one small lead in view of east headland at entrance to bay.

May 4, 1928

Visibility to about 15 miles and hazy over straits. Only open water visible in straits to northeast. From northeast around to west mostly fairly loose ice with very little open water.

May 7, 1928

Lead of open water from Wales island and extending both east and west as far as could be seen-40-45 miles. To north of Wales island this lead about 25 miles wide. To north of east entrance to Bay about 5 miles wide. Outside of this lead loose floe ice from east to west and then open water farther out in straits and within whole area under observation. To eastward lead open water from Stupart's bay extending along coast and from 2 to 6 miles wide.

May 8, 1928

Air Patrol No. C-63.

Route of patrol, across land to Sugluk inlet, northeast to Port de Boucherville, and west to Base of Nottingham island.

Visibility to east about 40 miles.

East of Cape Prince of Wales the straits almost all open water. From Cape Prince of Wales and off Wakeham Bay to east end of Charles island about 40 per cent open water in straits, most of this on the south side of the straits. Ice, pack and floe ice over remainder. As proceeded west noted open water decreasing until reaching east end of Nottingham practically no open water existed. To North of Digges, around Salisbury and Nottingham ice pack and floe ice all of which is very broken and rafted but does not appear to be heavily packed. Immediately around Digges islands considerable open water. Down into Hudson Bay pack ice, no open water in sight.

Time in air—2 hours, 50 minutes. Distance covered—250 miles.

May 9, 1928

Visibility from mountain about 35 miles.

Large lead open water extending easterly from Wales island along coast and over Stupart's bay and Joy bay. Remaining area of straits in view covered with loose pan ice.

May 10, 1928

Large lead of open water extending from Wales island easterly across entrance of Wakeham Bay. This lead was about 20 miles wide. Beyond this lead seen here, and to north, pack ice existed. To east over Joy bay and Stupart bay loose heavy ice and open water but no definite leads.

May 13, 1928

Visibility from mountain about 25 miles.

In area of straits under observation about 20 per cent open water, remainder iloe and pack ice heavily rafted.

May 14, 1928

Lead open water 10 to 15 miles outside of land floe ice extending from Wales island easterly as far as could be seen. Ice in straits outside this lead of loose floe formation with no definite leads.

May 18, 1928

Air Patrol No. C-65 (returning from Nottingham to Wakeham).

Route of Patrol, Nottingham island, south to Erik Cove, along coast to Little Sugluk, overland to King George's sound, around coast and into bay.

Visibility, 25 miles to 5 miles. Ice between Nottingham and Erik Cove small and medium sized pan and hummocky ice with about 30 per cent open water. No definite leads. Channel between Digges and mainland blocked with ice.

Visibility down to ten miles after leaving Erik Cove.

Over that area (i.e. from Erik Cove eastwards) which could be seen there existed about 90 per cent pack ice rough and very hummocky gradually becoming lighter as one proceeded east until off Wakeham bay ice appeared fairly light. Little open water along edge of land floe ice.

Time in air—3 hours, 10 minutes.

Distance covered—265 miles.

May 19, 1928

Visibility about 15 miles from mountain top.

To west and north of Wakeham Bay land floe ice and hummocky pack ice. To east loose hummocky ice with considerable open water but no definite leads.

May 20, 1928

Visibility in all directions about 30 miles (mountain top).

Outside of the land floe ice in straits there exists about 95 per cent very rough pack ice. No definite leads.

May 21, 1928

Air Patrol C-66.

Route of patrol-northwest from base to King Georges Sound, East to Doctor's land, and back to base.

Visibility 60 to 70 miles.

Ice all loose and in very small pans within area of observation. Small lakes of water all over area. A large lead from three to five miles wide extended from Cape Weggs to Dyke head all along coast line.

Time in air—1 hour, 5 minutes. Distance covered—80 miles.

May 22, 1928

Observations now being taken from east headland, entrance to Wakeham

Bay.

Lead of open water all along coast line from east to west, from 10 to 15 miles wide and extending as far as could be seen. Outside of this lead appeared level sheet ice, but distance away from observation point too far to form any reliable opinion. During day pieces of land floe ice breaking away from Wales island starting at 11 a.m. with ebb tide, had drifted to east of small island off outside east entrance to Wakeham Bay by 6 p.m. Estimated distance ice had drifted about 20 miles.

May 23, 1928

Open water about 10 to 15 miles wide extending east and west as far as could be seen. Ice in straits outside this lead does not appear very heavy and is loosely packed. Ice breaking away from the land floe on the ebb tide apparently drifts eastward until slack water and on flood tide drifts to north into straits away from south coast.

Visibility 45 to 50 miles.

May 24, 1928

Air Patrol No. C-67.

Route of patrol—north to west entrance of bay, west to Davies island, northeast ten miles, southeast to point in strait abeam Burgoyne Bay, west to base.

Visibility 50-60 miles.

East of a line from approx. Davies island to northwest end of Big island there existed about 50 per cent open water in the straits. The ice east of this line was of loose floe and pan formation very much broken up, and with a decreasing proportion of ice as one proceeded eastward. West of Davies island and to north a much greater proportion of heavier and more closely packed ice, estimated about 20 per cent open water. Observations would indicate there is no Fox Channel ice yet east of Cape Weggs, and as far west in straits from east entrance at Wakeham Bay the ice seen was of no more hindrance to navigation than ice encountered by expedition's ships when proceeding west through straits later part of July last.

Time in air—2 hours, 25 minutes.

Distance covered—200 miles.

May 25, 1928

No body of ice in sight but few small pieces drifting off from land floe. 4 p.m. ice conditions the same.

Visibility 40-45 miles down to 15-20 miles. Thick fog in evening.

May 26, 1928

Air Patrol No. C-68.

Route of patrol, north to west headland of bay, west to King George's sound, northwest in strait ten miles, east fifteen miles, southeast forty miles, west to Joy bay and return to base.

Visibility 50 to 60 miles.

From extreme point of visibility to east to extreme point to west and from the edge of the land floe ice on the south coast of the straits there existed a

strip of open water for approximately 35 miles off shore over which area only occasional small cakes of ice were seen. From approximately the centre of the straits to Baffin land pack ice among which no leads could be seen.

It would appear that southeasterly winds now prevailing have carried

practically all the loose ice in the straits to the north side.

Time in air-2 hours.

Distance covered—150 miles.

May 27, 1928

Observation taken from mountain top to-day shows visibility at the most 15 miles. Open water outside land floe ice.

May 28, 1928

Air Patrol No. C-69.

Route of patrol—north to entrance of bay, west to Outer island, east to Cape Prince of Wales, into Stupart bay and to base.

Visibility—60 to 70 miles.

Lead of open water existed from slightly east of Wakeham Bay to approximately the entrance of Sugluk inlet. This strip was about ten miles wide off Wakeham and increased in width to west until off Sugluk its width was about 30 miles, leaving Charles island entirely surrounded by open water. From point slightly east of Wakeham Bay to point few miles east of Burgoyne bay floe ice in contact with land floe. East of Burgoyne bay to past Cape Hopes Advance another lead open water about 15 miles wide. North of these leads towards Baffin land existed floe ice none of which appeared very heavy and among which no definite leads existed.

Time in air—2 hours 10 minutes.

Distance covered—170 miles.

May 29, 1928

Air Patrol No. C-70.

Route of patrol—north to Wales island, southwest in straits to Neptune head, along coast to entrance of bay and to base.

Visibility about 15 miles.

In area under observation 90 per cent open water, balance small floating ice cakes.

June 3, 1928

Visibility over straits 35 to 40 miles, varying throughout the day.

In early morning a lead of open water existed all along land floe ice, lead being about 15 miles wide. Few loose ice pans scattered over the area of this lead. By 12.30 p.m. this lead was closing up very fast and area becoming covered with loose pan ice. From northeast around to east open water could be seen and also loose panned ice.

June 4, 1928

Visibility 10 to 12 miles.

Loose panned ice and about 75 per cent open water. Ice in view appears to be local and not very heavy.

June 5, 1928

Loose ice and open water. Visibility approximate 8 miles.

June 6, 1928

There is a strip of heavy ice attached to the land floe about 300 yards wide and about 15 feet deep and extending from the small island north of the

camp to the reefs to the west in the centre of the entrance to the bay. Land ice between island and coast 40 inches thick.

Fog and rain.

June 7, 1928

About 75 per cent loose ice and remaining area under observation open water. Too foggy to form any idea of the nature of the ice.

Visibility about noon 7 to 8 miles.

June 8, 1928

Considerable open water from north around to east. From north around to west almost all ice, which appears heavier than has been observed for some time past. A few small leads to west. Land floe steadily breaking away.

June 9, 1928

Lead of open water from Wales island extending easterly along coast. This lead about 4 miles wide and beyond which loose packed hummocky ice exists as far as can be seen.

Visibility approximately 15 miles.

June 10, 1928

Open water from north northeast around to east southeast. Loose hummocky ice from north northeast to north northwest.

Visibility 10 to 12 miles.

June 13, 1928

All open water outside land floe ice. Land floe ice steadily breaking away. Visibility 15 to 20 miles.

June 14, 1928

Visibility ten miles.

No ice in sight outside of land floe.

June 15, 1928

Visibility 15 to 20 miles.

Loose panned ice which appears level. Approximately 80 per cent open water. Land floe ice noticeably decreased.

June 16, 1928

Visibility from 25 to 30 miles.

Small floe ice from east to east northeast. From east around to north all open water.

June 18, 1928

N.B.—Condition of shore ice on this date very bad, and decided not to make any further attempts to fly from bay ice using skis after this patrol.

Air Patrol No. C-71.

Route of Patrol—northeast over east entrance to bay, northwest to King George's sound, west in straits ten miles, southwest forty miles, south twenty miles, northwest to station.

Visibility in all directions 65 miles.

From extreme point of visibility to west about half way along Charles island, to extreme point of visibility to east slightly past Dyke head, along the south side of the straits existed an open lead of water 15 to 30 miles wide. Beyond this lead to north, northwest and northeast that area of the straits under observation was almost entirely covered by closely packed ice, among which existed occasional lakes of open water but no definite leads. This area of ice was consider-

ably rafted. Three bergs were also noted and several growlers. White straits between Big island and the mainland were clearly visible and observed to be full of ice.

Time in air—2 hours 10 minutes. Distance covered—170 miles.

June 19, 1928

Strip of open water about 20 miles wide all along the coast outside of the land floe. Beyond this lead in the straits appeared loose floe ice and several growlers or small bergs.

To north and east visibility 25 to 30 miles.

June 20, 1928

Lead of open water 15 to 20 miles wide extending all along coast within visibility. Large floes of ice outside this lead in straits with several small bergs amongst the floe ice.

Visibility 45 to 50 miles.

June 21, 1928

No ice in sight with exception of loose level pans apparently breaking away from land floe and bay ice. About 95 per cent open water. Visibility between 25 to 30 miles. Land floe steadily breaking away.

June 22, 1928

Visibility over straits 40 to 50 miles.

Area under observation about 90 per cent loose packed ice and very hummocky. Ice reported now in sight to be from 40 to 50 feet high out of the water and it is the roughest and heaviest ice seen in this vicinity.

June 23, 1928

From north around to west ice approximately 20 miles off shore. From north around to easterly loosely packed ice in to land. Several small bergs exist among the loose ice, and the latter appears rough, but not heavy.

Visibility 35 to 40 miles.

June 24, 1928

No report from observation camp, but from mountain, viz., to east 45 miles, to north 30 miles, straits within this areas covered with heavily packed ice and occasional icebergs. One definite lead about 5 miles wide running east from east end Wales island for about 12 miles.

June 25, 1928

Small lead of open water all along coast line approximately 1 mile wide. Outside of lead all loosely packed hummocky ice. A number of small bergs in sight.

June 26,1928

With the ebb tide in the afternoon the ice in the bay all moved to the west side and farther up the bay and left a clear for about one mile off shore at the base, and along about 3 miles towards the straits. Ice all moving between base and head of bay.

Lead of open water two to three miles wide all along coast. Outside this

lead straits full of loose hummocky ice. Visibility 40 to 45 miles.

June 27, 1928

Ice in bay nearly all gone and 80 per cent open water exists.

All loose ice in sight with small blind leads. Land floe ice broken away and drifting back and forth with tide.

Visibility between 25 and 30 miles at Camp.

June 28, 1928

Ice very loose all along coast for a distance of 20 to 25 miles. Outside that distance appears close packed.

Visibility 40 to 45 miles.

Ice on shore prevents aircraft being launched on pontoons.

June 29, 1928

Bay all clear of ice. At high-water mark on beach there still exists some collar ice.

June 30, 1928

Air Patrol No. C-72.

Route of Patrol—northwest to King George's Sound, west 20 miles, south to base.

Visibility 10 to 15 miles.

The area of the straits under observation consisted of approximately 90 per cent open water. The remaining 10 per cent consisted of loose running abroad ice. All land floe ice has broken away with the exception of small area about one square mile in Fisher bay.

Time in air—1 hour 5 minutes. Distance covered—85 miles.

July 2, 1928

Visibility 30 miles.

Open water all along coast. In distance, to east, could be seen ice but this too far away to make any estimate of its nature.

July 3, 1928

Visibility 20 miles. No ice in sight.

July 4, 1928

Air patrol No. C-73

Route of patrol—northwest to entrance to bay, north forty miles, southeast fifty miles, west to vicinity Neptune head, along coast to entrance of bay and return to base.

Visibility 60 miles.

From slightly east of Neptune Head to as far as could be seen there existed open water for a distance of 20 to 30 miles north into the straits from the south coast.

To northwest on the horizon could be seen loose flow ice. To the north and northeast also floe ice to the north side of the strait. To the east and right across the straits from about 8 miles east of Neptune Head the straits were also covered with loose floe ice. I would judge that the south side of the straits are navigable by any deep sea vessel. On the north side appeared more closely packed than south and less navigable. Throughout all the floe ice seen there existed several growlers and about 8 icebergs in different localities. One of these bergs I estimate is about 125 feet high above the water.

Time in air—2 hours 20 minutes.

Distance covered—180 miles.

July 5, 1928

Air Patrol No. C-74.

Route of patrol—to Cape Hopes Advance peninsula, twice around and return to base.

Photographic flight. Visibility—50 miles.

Eighty per cent open water existed in that area under observation to north and west of Cape Prince of Wales, remainder loose running abroad ice. A lead of open water 15 miles in width extended from Wales island to Cape Hopes Advance. To the north of this lead existed what appeared to be heavy floe ice, having about 15 per cent water among it. This condition prevailed as far north as visibility. At Cape Hopes Advance the lead narrowed to a width of 1 or 2 miles, then gradually disappeared among the heavy floe ice towards Akpatok island. Very little open water seen in Ungava bay.

Time in air—3 hours 35 minutes. Distance covered—275 miles.

July 6, 1928

Air patrol No. C-75 Visibility about 25 miles.

Route of patrol—base to Cape Hopes Advance, along coast to Wales island

and return to base.

The navigable area of the straits (in that area under observation) is on the south side of the straits and is about 45 miles wide at Cape Weggs, gradually narrowing in until about 12 to 15 miles wide off Cape Hopes Advance. This lead is absolutely clear of ice to west of Neptune Head, but for small area just east of Davies island. From Neptune Head east to Hopes Advance the lead is dotted with areas of loose ice. North side of straits appeared to be full of heavy and closely packed ice. To east and northeast ice conditions similar to that on north, with only a few lakes of open water to northeast of Hopes Advance in locality of where ship was seen. Ice conditions sent to Montcalm along with message advising them as to best course to take from their present position to reach more navigable water.

Time in air—3 hours 15 minutes. Distance covered—250 miles.

July 8, 1928

Air Patrol No. C-76.

Route of patrol, due north from base 40 miles (off King George's Sound) circled *Montcalm* and return by same route—due south to base.

Visibility fifty miles.

Ship seen steaming towards Wales island through open water having occasional small pan. 90 per cent open water existed to west and northwest of the vessel, remainder small pan ice. To north and east heavy floe ice sighted. Heavy ice seen north and east of Neptune Head. A lead of open water extended from Neptune Head to vicinity of Diana Bay. This lead 5 to 15 miles wide.

Time in air—1 hour 30 minutes. Distance covered—120 miles.

July 11, 1928

Observation from mountain—visibility over straits of about 15 miles beyond Wales island with no ice in sight in any direction but for few loose floes of light appearing ice off east end of Wales island.

July 12, 1928

Air Patrol No. C-77.

Route of patrol—northwest to abeam Weggs island, out in straits about 10 miles, southeast to Stupart Bay and return to base.

Visibility 30 to 60 miles.

Open water from point 20 miles off Dyke Head to point off Cape Weggs. This lead is about 15 miles wide from Cape Weggs on to extreme point of visibility to west. To east from Dyke Head this lead gradually narrows down

to about 5 miles in width at extreme point of visibility to eastwards, Cape Hopes Advance. Area in centre of straits all loose and well opened out ice in mostly small pans, with a few bergs and growlers. Away on north side of straits at extreme point of visibility there existed heavier and more closely packed ice in floes running from as far west as could be seen to limit of visibility to east.

Time in air—2 hours.

Distance covered—170 miles.

July 13, 1928

Air patrol No. C-78.

Route of patrol—northwest to Davies island, west to Cape Weggs, northwest to Charles island and over Charles island, west in straits to about forty miles off King George's sound, south to past Neptune head, along coast of Burgoyne Bay, Whitely bay, and Joy Bay to Base.

Visibility 60 miles.

Pack ice 20 miles off Wales island extending in a northwesterly and southeasterly direction. The ice is loosely packed. Open water right across straits to north of west headland King George sound. Heavy ice 25 miles north Weggs island. Very little open water observed on north side of Straits. Open to north and northwest of Cape Weggs as far as visibility excepting small floes just west and northwest Charles island. To east of Charles all open water right down coast to Wakeham Bay.

Open water around Neptune head to Burgoyne bay. Open water existed east

and northeast Neptune head as far as visibility.

Time in air-4 hours.

Distance covered—300 miles.

July 16, 1928

Air Patrol No. C-79.

Route of patrol—northeast from base 35 miles, southeast to Cape Hopes Advance, west to Cape Prince of Wales and return to base.

Visibility 40 to 50 miles.

Lead of open water along south side of straits about 40 miles wide at end of point of visibility to west and gradually narrowing down—from point due north of Dyke Head until about 10 or 12 miles wide off Cape Hopes Advance. Ice barely visible to northwest appeared closely packed and heavy. Towards Big island and Lake Harbour loose with few bergs and growlers. To northeast loose ice along edge of open water and beyond that heavy floe which continued around into Ungava bay. An open lead about 10 miles wide extended from Cape Hopes Advance away to northeast as far as could be seen. Large area around Cape Hopes Advance all open water and Diana Bay practically clear of ice but for few pans behind islands in the bay.

Time in air—2 hours, 45 minutes.

Distance covered—210 miles.

July 19, 1928

Observation from mountain to south of station reports visibility from 30 to 35 miles and no ice of any description in sight.

july 20, 1928

Air Patrol No. C-80.

Route of patrol, southeast to Cape Hopes Advance and return to base.

Visibility in all directions approximately 75 miles.

Over that area of the straits and Ungava bay under observation there existed no ice other than widely scattered small pans, a few growlers in every direction, and a very few bergs.

Off Dyke Head and about ten miles due north a berg was seen and recognized as the same berg which on July 4 last lay about eight miles northeast of Neptune Head and of which photographs were taken. A comparison of the two locations will indicate the movements of this berg during the past sixteen days.

Time in air—2 hours, 25 minutes. Distance covered—175 miles.

July 22, 1928

Air Patrol No. C-81.

Route of Patrol, northeast in straits to off Cape Weggs and return.

Visibility approximately 75 miles.

There existed very little ice, all of which was in small pans and very widely scattered over the straits. There also existed a few growlers and east of Wakeham Bay two or three bergs.

Time in air—2 hours 15 minutes.

Distance covered—200 miles.

July 23, 1928

Air Patrol No. C-82.

Route of patrol, southeast to western head of Diana Bay, north in straits and west to base.

Visibility about 60 miles.

Over that area of the straits under observation only scattered pans of ice, several growlers and a few bergs.

Time in air—2 hours 10 minutes. Distance covered—195 miles.

July 26, 1928

Air Patrol No. C-83.

Route of patrol—northwest in straits to vicinity Cape Weggs, southeast to abeam Cape Prince of Wales, and return.

Visibility 75 miles.

Within area of observation and as shown on map there existed only scattered ice pans, a few growlers and odd bergs. These were for the most part in area of straits towards the Spicer islands. Ship navigation conditions in straits excellent.

Time in air—2 hours, 25 minutes.

Distance covered—225 miles.

July 28, 1928

Air Patrol No. C-84.

Route of patrol—southwest from base to Cape Hopes Advance, and thence northeast to base.

Visibility 50 to 75 miles.

In the area under observation only scattered ice pans, a few growlers and odd bergs.

Time in air—2 hours 25 minutes.

Distance covered—215 miles.

August 4, 1928.

Air Patrol No. C-85.

Aircraft returning from Port Burwell to Wakeham Bay.

Unable to report on ice owing to weather conditions.

Only ice sighted in the straits (i.e. from Cape Hopes Advance west to Wakeham) was a few scattered growlers.

Time in air—2 hours, 15 minutes.

Distance covered—220 miles.

Air Patrols were carried out on August 9, August 12 and August 18, 1928, but no ice was seen except a few scattered icebergs.

#### BASE "A"-PORT BURWELL

November 24, 1927

Visibility ten miles.

Slob ice forming in Mission Cove and Fox harbour.

November 25, 1927

Visibility twenty miles.

Slob ice in Mission Cove and Fox harbour.

November 26, 1927

Visibility twenty miles.

Slob ice in Fox harbour and Mission Cove.

November 27, 1927

Visibility two miles.

Mission cove and Fox harbour frozen over.

November 29, 1927

Visibility five miles.

Ice in Fox harbour only along shore and breaking up. Ice in Mission cove breaking up along shore.

November 30, 1927

Visibility twenty-five miles.

Ice again forming in Fox harbour. Ice in Mission Cove becoming heavier. A large floe of ice appears to be moving south to the east of Gray straits.

December 1, 1927

Visibility ten miles.

Fox harbour and Mission Cove frozen over. Large field of floe ice to the northeast, north and northwest. This ice field appears to have moved in a southeasterly direction to within approximately eight miles of shore.

December 2, 1927

Visibility one mile.

Mission cove and Fox harbour full of slob ice. No trace of ice sighted yesterday. The ice in Mission Cove appears to be becoming heavier although a great deal of slob has come in to-day.

December 3, 1927

Visibility—nil.

Fox harbour and Mission cove frozen over.

December 4, 1927

Visibility six miles.

No ice can be seen in straits.

December 5, 1927

Visibility six miles.

Ice in all directions as far as can be seen.

December 6, 1927

Visibility one mile.

Fox harbour, Mission Cove and main harbour frozen over.

December 7, 1927

Visibility two miles.

Slob ice, level, light, approximately three inches thick, actual observation.

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December 8, 1927

Visibility twelve miles.

Ice—slob, level, three to nine inches thick. Ice in Fox harbour at least three to four inches slush over ice with coating of hard snow over slush. Ice in Blind Bay reported heavier than in Fox harbour.

December 9, 1927

Visibility four miles.

During the night slob ice was broken and carried away from entrance to Fox harbour and main harbour. Very little ice in strait. What there was appeared to be moving northeast. Ice in Mission Cove level, light, four inches thick, actual observation.

December 10, 1927

Visibility—two miles.

Fox harbour again filled with slob, varying from three to eleven inches.

December 11, 1927

Visibility—twelve miles.

Ice in Fox harbour and Mission Cove nine inches thick. Ice in straits heavy hummocky.

December 13, 1927

Air Patrol No. A-2.

Route of Patrol "A-2"—west ten miles, north six miles, southeast to Burwell.

Visibility at 900 ft.—ten miles.

Slob ice covering area up to four miles from shore, balance open water. No heavy drift ice observed.

Time in air—45 mins.

December 14, 1927

Visibility two miles.

Ice in Mission Cove varies from 8 inches to 2 feet in thickness. No heavy drift ice observed.

December 15, 1927

Air Patrol No. A-3.

Route of Patrol—"A-3"—north to Resolution island, north northwest to Lower Savage island, and south southeast to Port Burwell.

Visibility—ten miles.

Thick ice field approx. five miles out to sea from the Button islands. Centre of strait practically open water with thin coating of ice. Large expanses of water with absolutely no ice whatever. Ice field around Resolution island approx. a quarter of a mile around the coast. Sighted large iceberg about to enter Gabriel strait, other than this particular one no other icebergs sighted. Ice field approx. a quarter of a mile around Lower Savage islands. Large expanse of open water approx. ten miles south of Port Burwell near coast.

Time in air—3 hours 15 minutes.

December 16, 1927

Visibility one-half mile.

Ice in Mission cove very sloppy. In Fox harbour breaking a little.

December 17, 1927

Visibility one mile.

Ice at entrance to Fox harbour breaking.

#### December 18, 1927

Visibility seven miles.

Flight—15 mins.

During time aircraft in air the following was noted—open water up to three miles from shore, then slob ice for approximately two miles. Then open water as far as can be seen. At the entrance to Fox harbour and the main harbour the ice is breaking.

#### December 19, 1927

Visibility one mile.

Ice in Mission Cove, Fox harbour, and Main harbour has become very slushy, open water from shore, no heavy drift ice observed.

#### December 20, 1927

Visibility four miles.

Ice at entrance to Fox harbour and Main harbour breaking into small pieces. Patches of slob ice in strait, 15 per cent ice, balance open water.

#### December 22, 1927

Visibility six miles.

Open water for two miles from shore then slob ice approximately 90 per cent. On the horizon there appeared to be some heavy drift ice but it was very indistinct.

#### December 24, 1927

Visibility one mile.

Ice appears to have drifted to shore, no open water observed. Ice, slob light.

#### December 26, 1927

Visibility two miles.

No open water or heavy drift ice observed.

#### December 27, 1927

Visibility seven miles.

Slob ice as previously reported, no heavy drift ice observed.

#### December 28, 1927

Visibility half a mile.

No open water or heavy ice observed.

#### December 29, 1927

Visibility one mile.

No open water or heavy ice observed.

#### December 30, 1927

Visibility mile and a half.

No open water or heavy ice observed.

#### January 5, 1928

Visibility six miles.

Ice along shore very rough in Fox harbour, centre smooth with light coating of snow. Ice in straits very rough hummocky; no open water. Ice in straits this year's ice; no heavy ice has yet been observed.

January 6, 1928

Visibility mile and a half.

Ice in straits this year's, very hummocky. Ice along shore very rough; no open water or heavy drift ice observed.

January 7, 1928

Visibility two miles down to one hundred yards.

Ice in straits new this year, very rough and hummocky. Ice along shore continually becoming worse, being piled by tide and wind.

January 9, 1928

Visibility seven miles.

Ice in strait new this year, very rough and hummocky. No open water or heavy drift ice observed.

January 10, 1928

Visibility seven miles.

Open water from shore for approximately five miles, then ice. Ice in straits new this year, no heavy ice observed.

January 11, 1928

Visibility four miles.

Ice in straits has in some cases piled to twenty and twenty-five feet, is new this year, impossible to travel on. Open water approximately two per cent, no heavy drift ice observed.

January 13, 1928

Air Patrol No. A-4.

Route of patrol—four miles out to sea along coast from Base to Cape Chidley and the Button islands, then back again over same route to approximately seventeen miles south of the base. This route covered twice.

Visibility—at 2,000 feet to the south four miles and to the north and west

ten miles.

Ice in straits is new within last few days and very thin, from two thousand feet it is possible to see through it. There are some large leads of open water approximately forty per cent is open water. At the entrance to Hudson Strait there is no ice but in the Gray strait it is packed. The Atlantic as far as could be seen was covered with slob ice, no heavy drift ice was observed. Ice in Ungava Bay is as above with the exception that the leads are more frequent and of a larger size.

In my opinion, although not a deep water sailor, it is possible for ships to make way through the present ice up to the entrance to Port Burwell harbour.

Time in air—1 hour 15 minutes.

January 14, 1928

Visibility four miles.

Ice in straits very light, approximately 30 per cent open water.

January 15, 1928

Visibility two miles.

Ice in straits very thin, impossible to travel on it, no open water or heavy drift ice observed.

January 17, 1928

Air Patrol No. A-5.

Route of Patrol-routine patrol "A-2"—west for twenty miles and returned to Button islands, north for twenty-five miles to centre of strait, southwest for thirty-five miles, east-southeast to Base.

Visibility only five miles.

Thick icefield interspersed with leads approximately fifty and hundred yards wide in strait over patrol area. Not considered practicable for navigation in this area. No open water observed west of the Button islands. Open water as far as visibility extended northeast and east of the Button islands. Open water through Grav strait and between Buttons.

Time in air—2 hours 10 minutes.

#### January 18, 1928

Air Patrol No. A-6.

Route of Patrol—southwest for eight miles, northeast to Cape Chidley, then approximately three miles from shore to Jakpangajok, same course back to Cape Chidley and Button islands and return to Base.

Visibility at 1,600 feet not more than six miles to the north and south, to

the east and west not more than two miles.

Gray straits and entrance to Hudson Strait open water. To the north and west of Port Burwell ice is light and in some cases can be seen through, approximately ten per cent open water. To the south and west of Port Burwell as far down as Jakpangajok same condition, except that the open water is not more than five per cent.

Time in air—1 hour 5 minutes.

#### January 19, 1928

Visibility two miles.

No heavy drift ice or open water observed.

#### January 25, 1928

Air Patrol No. A-7.

Route of patrol—due north to Resolution island and return to Base.

Visibility good due south but very poor north and east.

Thickly packed icefield across whole width of straits. Threaded with small leads approximately 50 to 100 yards wide. Ice-field more thickly packed than on previous patrols. Impossible for vessels to navigate except heavy ice-breaker and then very doubtful. Open water outside of strait to northeast of Button islands and open water between islands.

Time in air—1 hour 40 minutes.

#### January 26, 1928

Visibility half a mile.

Ice in straits has in some cases piled as high as twenty-five feet, is very rough, no open water observed. Ice in Mission Cove along shore is breaking up with considerable overflow.

#### January 29, 1928

Visibility fifteen miles.

Ice in straits pack very hummocky. Ice in Mission Cove has broken from shore and rafted.

#### January 30, 1928

Visibility ten miles.

Ice in straits pack has rafted considerably.

#### February 3, 1928

Visibility half a mile.

Ice in straits pack, very hummocky, impossible to travel on.

#### February 7, 1928

Air Patrol No. A-8.

Route of patrol-base to northwest approximately seven miles, south to

Jakpangajok, northeast to base.

Visibility to-day worse than on any previous occasion the best being two miles, just before landing closing to half mile at best. Immediately after landing snow began to fall. To the north and northeast visibility was nil; a heavy black mist of fog hanging low over the ground.

Ice pack. No open water observed over area patrolled.

Time in air-50 minutes.

#### February 12, 1928

Air Patrol No. A-9.

Route of Patrol—north northeast for sixty miles abreast of Resolution island, west to coast of Resolution island, up east coast of island, west over island, south southeast to Base.

Visibility fifteen miles.

Thick ice-fields over whole width of straits interspersed with small leads of approximately 100 yards in width and length. Very thin ice around coast of Resolution island for distance of approximately five miles out from the coast. Also large leads in some cases as large as three miles width by five miles long. Due east of Resolution and as far as visibility extended ice similar to that around Resolution. It is considered that a strong ice-breaker could force a passage at this point. At every other point in the straits ice very thickly packed as far as visibility and would certainly present very serious difficulties to any ice-breaker. Immediately due north of the Buttons two miles from shore large lead approximately four miles long by three miles wide. Around coast of Cape Chidley from Fox channel to entrance to Gray straits open strip of water approximately 200 yards wide.

Time in air—2 hours 35 minutes.

## February 16, 1928

Air Patrol No. A-10.

Route of patrol, northwest fourteen miles, southwest 30 miles, south to Cape Kattaktok, north to Jakpangajok, northeast to McLennan strait, to Atlantic, to Cape Chidley to Gray straits, to base.

Visibility to east 8 miles, to west 20 miles, to south 10 miles, north as far

as Buttons.

Numerous leads to northwest, at entrance to straits open water. Along coast a large lead as far south as Jakpangajok to Gray strait. To south of Jakpangajok a number of small leads balance pack ice. In Atlantic 50 per cent open water, ice is no heavier than when we came up on the *Stanley* in July. In my opinion any ship could make way through.

Time in air—2 hours 5 minutes.

# February 17, 1928

Air Patrol No. A-11-A.

Route of Patrol—north to Button islands, north to Resolution island, north northwest up west coast of Resolution to Lower Savage island, north to east bluff on Baffin land, north over Baffin land to Grinnel Glacier, south to Lower Savage island, south southeast down west coast of Resolution island, south towards Port Burwell, east over mainland of Labrador out over Atlantic ocean. Machine landed on ice in Atlantic ocean.

Visibility five to fifteen miles.

Considerable amount of open water due east in Atlantic as far as visibility, practically all open water in Gray straits. Number of large leads throughout whole width of straits considerably more than on previous patrols. Leads much more numerous in the vicinity of Resolution island and around the island practically open water. Ice due west and southwest in the strait much denser as far as visibility permitted. East ice conditions similar to vicinity of Resolution island several icebergs were observed just off the west coast and the ice appeared to be extremely thin. Between Lower Savage island and Baffin land practically all open water. Ice in Gabriel straits very thin. Around the coast of Baffin land all open water.

Time in air—4 hours, 30 minutes.

After walking over ice and paddling between ice cakes for one week in the Atlantic ocean, and walking over land for another week, the personnel of the aircraft reached their base safely.

#### February 19, 1928

Air Patrol No. A-12.

Special Patrol searching for aircraft missing.

Visibility poor.

Ice in straits pan, very hummocky.

Time in air—55 minutes.

#### February 20, 1928

Air Patrol No. A-14.

Special Patrol looking for missing aircraft—crossed to east coast south of Cape Chidley, proceeded south over Eclipse Harbour to a point East of Four Peaks and turned north, passed over Pikkiutit islands and returned to Base.

Visibility about—35 miles.

No sign of anything on ice. About 40 per cent water and 60 per cent floe ice on south part of patrol. Considerable open water in vicinity of Cape Chidley and Buttons.

Time in air—3 hours, 05 minutes.

Air Patrol No. A-15.

Special patrol looking for missing aircraft—from McLennan straits to Atlantic, to Cape Chidley over islands along shore to base.

Time in air-25 minutes.

## February 20, 1928

Air Patrol No. A-16—(Lawrence).

Route of special patrol looking for missing aircraft—to west side of Buttons, thence west into Gray straits about ten miles and back through Gray straits to Atlantic and to northeast side of Buttons thence to base.

Visibility to east poor, to north Resolution island in sight, to west about

30 miles, to south and southeast about 40 miles.

Pack ice very rough and hummocky all along east shore Ungava Bay for about 8 to 10 miles from shore, outside of that floe ice much rafted and very few leads none definite. North entrance (about Buttons) to the straits also full of floe ice. Gray straits almost open water. The Pack ice apparently any floe ice moving eastward through Gray strait. About 40 per cent open water in Atlantic. Ice of floe formation in individual fields.

Time in air—1 hour, 10 minutes. Air Patrol No. A-17 (Coghill).

Route of special patrol, looking for missing aircraft—to west side of Button islands, thence to west into straits and back through Gray Strait to Atlantic and northeast side of Buttons.

Pack ice very hummocky and rough along east shore of Ungava Bay for 8 to 10 miles from shore. Balance field ice rafted and few leads. Entrance to strait filled with floe ice. Gray straits open water. 40 to 50 per cent open water in Atlantic.

Time in air—1 hour, 5 minutes.

February 23, 1928

Air Patrol No. A-18 (Leitch).

Special patrol searching for missing aircraft, followed coast of Ungava Bay south from Port Burwell to a point southwest of Aoloviak, and returned to Base.

Visibility ten to fifteen miles to the south and to the north very poor.

Land floe about two miles off shore. Open leads around points of land and ice pack consisting of about 80 per cent cake ice 20 per cent open water.

Time in air—2 hours, 15 minutes. Air Patrol No. A-19 (Coghill).

Special patrol searching for missing aircraft, followed coast of Ungava Bay to south of Jakpangajok, and returned to Base.

Visibility approximately ten miles—then very poor.

Ice approximately 80 per cent pan lightly packed, balance open water. Land floe two miles from shore.

Time in air—1 hour, 30 minutes.

March 1, 1928

Air Patrol No. A-20 (Lawrence).

Special patrol searching for missing aircraft—course southeast along east coast of Ungava, turned northwest on course into Ungava to a point about 15 miles off shore and from thence to point about 20 miles west and slightly north of Burwell, and return to Base.

Visibility—fair to poor.

Ice in Ungava Bay heavy floe outside of strip of land floe ice about four miles deep. Land floe ice grows heavier as one proceeds down east coast of Ungava and of much wider area gradually tapering off to nil at Cape Chidley. Much open water in Atlantic.

Time in air—1 hour, 30 minutes. Air Patrol No. A-21 (Coghill).

Special patrol searching for missing aircraft—proceeded southeast along east coast of Ungava Bay until just south of Jakpangajok, altered course to north towards Base, returned to Base. Returned along coast to south of Jakpangajok and returned to base.

Visibility—fair to poor.

This patrol made in company with aircraft piloted by Sq. Leader Law-rence—same ice conditions reported.

Time in air—2 hours, 30 minutes.

March 4, 1928

Visibility fifteen to twenty miles.

Ice in straits ninety per cent open water in Ungava Bay ice loose floe fifty per cent.

Observations made at bay to the north of the Base—open about half way from the entrance and a strong current is always running.

March 5, 1928

Visibility—five miles.

Ice in straits—land floe two miles, balance 20 per cent ice. 80 per cent open water.

March 12, 1928

Visibility about 12 miles.

Ice in straits land floe for about two miles, balance ice pack.

March 13, 1928

Visibility to northeast five miles.

Ice in straits pack approximately five per cent open water.

March 14, 1928

Visibility 15 miles.

Ice pack outside of land floe very hummocky.

March 14, 1928

Air Patrol No. B-39—returning from Port Burwell to Wakeham Bay (Flight Lieut, Leitch).

South to Omanek, west over Akpatok, over south end Diana Bay, north

of Dyke head and Joy Bay to Wakeham Bay.

Visibility above clouds about 30 miles.

Part of ice conditions obscured by clouds. Land floe extends about two miles from shore off East coast Ungava. Most of Bay covered by small pan and about 30 per cent open water.

Time in air—3 hours, 25 minutes.

Distance covered—292 miles.

March 17, 1928

Air Patrol No. A-22.

Route of patrol—along edge of land floe south as far as Omanek and north as far as Gray Straits and return.

Visibility 35 miles in all directions.

Open water to west beyond land floe extended 15 miles. Opposite Omanek open water extended as far as 25 miles. Gray straits open water. Entrance to straits 40 per cent open water. Atlantic 10 per cent open water with numerous icebergs to east and northeast of Buttons.

Time in air—40 minutes.

March 20, 1928

Visibility 30 miles.

Beyond land floe ice in straits nil.

March 30, 1928

Visibility 35 miles to nil.

Ice in straits 10 per cent—90 per cent open water.

March 31, 1928

Visibility nil to 30 miles.

Ice in straits 50 per cent open water, pans very small.

April 2, 1928

Visibility nil to seven miles.

Ice in straits is very broken small pans only. The ice at entrance to Fox harbour is gradually breaking in past the point, land floe has entirely disappeared.

April 4, 1928

Visibility nil to five miles.

Ice in straits is very hummocky.

April 5, 1928

Visibility 20 miles to nil.

Ice in straits small pan and rafted.

April 10, 1928

Air Patrol No. A-23.

Route of patrol—north to Button islands and south two miles off shore as far as Jakpangajok, north to McLennan straits to base.

Visibility at 5,000 feet to north 20 miles, to east 6 miles, to south and

west 35 miles.

In vicinity of Gray straits and entrance to Hudson Straits ice is very light and loosely packed. Along shore from Gray straits as far south as could be seen open lead varying from 4 to 6 miles wide balance 40 per cent open water 60 per cent ice. Land floe appears to have disappeared and what little ice along shore was very thin. Unable to observe conditions in Atlantic owing to poor visibility. To northeast of Buttons appeared to be a few pieces of heavy ice but owing to poor visibility unable to confirm this.

Time in air—1 hour.

April 12, 1928

Visibility—20 miles low.

Ice at entrance to main harbour breaking away, at entrance to Fox harbour ice is slightly rafted, pans are very small, open water before slight pack along shore.

April 13, 1928

Visibility 20 miles to nil.

Ice at entrance to Fox harbour is very light and rafted, moves with the wind at times, open water is six to seven miles wide and closes in to one mile.

April 14, 1928

Visibility 30 miles to 5 miles.

Open water in straits as far as could be seen.

April 15, 1928

Visibility 25 miles.

Ice in straits very light pack twenty per cent open water. With wind ice drifts leaving in some cases open lead 6 to 8 miles wide.

April 16, 1928

Visibility 20 miles.

Ice in straits ten per cent balance open water. On horizon appeared to be heavy drift ice at least thirty feet high.

April 17, 1928

Visibility 15 miles.

Ice in straits ten per cent small pans balance open water.

April 20, 1928

Visibility 8 miles to nil.

Ice in straits ten per cent, balance open water. Ice in small fields.

April 21, 1928

Visibility 30 miles.

Ice in straits—90 per cent open water.

#### April 22, 1928

Visibility 35 miles.

Wind from north to-day has blown loose ice fields towards shore in vicinity of base and entrance to Hudson Strait. Ungava Bay 100 per cent open water.

## April 23, 1928

Air Patrol No. A-24.

Route of patrol—south along east coast Ungava to Omanek, north to Button island, south to base.

Visibility at 1,700 feet—30 miles.

In Ungava bay to south and southwest of Burwell 70 per cent open water, very calm, all ice slob in very small pans, loosely packed. To north and northwest of Burwell several large icebergs. Entrance to Hudson Straits practically free of ice. McLennan straits practically open.

Time in air-45 minutes.

## April 24, 1928

Air Patrol No. A-25. Local endurance patrol.

Visibility 20 miles.

Open water in all directions including Atlantic in the vicinity of Port Burwell and Cape Chidley. Approximate extent of shore ice two miles off shore. Due southwest of Port Burwell several large icebergs were observed approximately 20 miles out to sea. At same distance at other side of water large icefield density of same unknown apparently this being the ice constantly moving to and from the land by the action of the winds.

Time in air—4 hours, 25 minutes.

# April 25, 1928

Air Patrol No. A-27.

Local endurance patrol.

Visibility 20 miles.

Ice in straits small pans in fields approximately quarter mile squares. 40 per cent open water. In Ungava Bay 90 per cent open water. To northwest, north and northeast icebergs, those to northwest appear to be working towards Burwell. Captain Bennett considers that any ship could make way through any of the ice observed to-day.

Time in air—5 hours.

# April 26, 1928

Air Patrol No. A-26.

Route of patrol—local endurance.

Visibility at 1,000 feet approximately twenty miles.

Open water in all directions around vicinity of Port Burwell and Cape Chidley. Due west and southwest of Port Burwell several large icebergs and heavy ice were observed at approximately a distance of twenty miles from shore.

Time in air-5 hours 3 minutes.

# April 27, 1928

Visibility 20 miles.

Ice in straits has packed in the vicinity of Burwell. Gray straits 20 per cent open water. South Ungava open water.

April 28, 1928

Visibility five miles.

Ice in Mission Cove becoming very soft, in main harbour crust still remains hard.

April 29, 1928

Air patrol No. A-28.

Route of Patrol—south along east coast Ungava Bay to Omanek, north to Buttons and Cape Chidley and return to base.

Visibility at 2,400 feet—40 miles.

Ungava Bay and Hudson straits 100 per cent loosely packed, Atlantic 50 per cent open water, Gray straits, open waters, all ice observed slob small pans loosely packed.

Time in air—1 hour 5 minutes.

April 30, 1928

Air Patrol No. A-29.

Route of patrol—photographic flight-pictures taken of the following areas, Cape Chidley, Gray straits, West coast from Cape Chidley to Omanek, east coast from Cape Chidley to Joksut.

Visibility from 10,000 feet approximately sixty miles.

No open water in straits with exception of occasional small leads. Open water between Button islands and in Gray straits. Open water in Atlantic between Cape Chidley south to Eclipse harbour and east for approximately thirty miles. Ice-field in straits very thin.

Time in air—1 hour 55 minutes.

May 1, 1928

Air Patrol No. A-30.

Route of patrol—south along east coast Ungava Bay to Omanek, north to McLennan strait to Atlantic, Eelipse harbour to Cape Chidley, Button islands to base.

Visibility at 2,000 feet 25 miles, at 4,000 feet 50 miles.

Atlantic from Chidley south free of ice. To northeast of Chidley large icefield covered area observed. Ungava Bay one icefield, slob ice, small pans, loosely packed. Gray straits packed with small pans slob ice. Entrance to Hudson Strait 20 per cent open water.

Time in air-1 hour 30 minutes.

May 2, 1928

Visibility 10 to 30 miles.

Ice field covering area due west of Burwell, to southeast in Ungava Bay 40 per cent open water, to north and northeast 50 per cent open water. All ice observed slob in very small pans, none rafted.

May 5, 1928

Visibility nil to 10 miles.

Ice still unchanged in Ungava Bay. Ten per cent open water to west of Burwell, no open water to northwest. All ice is light slob, in large field loosely packed.

May 8, 1928

Visibility nil to 10 miles.

Ice in Fox harbour is beginning to show water. At bar between Fox harbour and Mission Cove ice has broken up and water running. Main harbour becoming very soft although in some place 27 inches snow on ice.

May 9, 1928

Air Patrol No. A-31.

Route of Patrol-south along east coast Ungava Bay to Omanek, northeast to Gray strait and return to base.

Visibility 50 miles.

Absolutely no water except at entrance to Sock lake where there are a few reefs. Ice has broken up there. At Omanek some open water along shore where there are apparently some reefs or rocks. Jakpangajok, some leads west of Jakpangajok, south quite numerous. Atlantic open water. Gray straits and entrance to Hudson strait 50 per cent open water. All ice observed, slob, very lightly packed.

Time in air-1 hour 30 minutes.

May 14, 1928

Air Patrol No. A-32.

Route of Patrol—southeast to Eclipse harbour, north to Gray strait, west through Gray strait, south to Jakpangajok, north to base. Visibility 60 to 70 miles—could see Akpatok island.

Open water in Atlantic, large ice-field twenty miles east of Eclipse harbour. Straits entirely filled with ice. Open water between Button islands and in Gray Straits.

Time in air—2 hours 10 minutes.

May 17, 1928

Visibility 10 miles.

Ice in straits light slob packed; no open water observed.

May 19, 1928

Air Patrol No. A-33.

Route of Patrol—south along east coast Ungava bay to Cape Kattatok, thence north over same course to Omanek, thence east to Atlantic, north of Eclipse harbour, north from there to Cape Chidley and Button islands, thence to base.

Visibility west, south and east, 60 miles, north 30 miles.

Ungava Bay as far as could be seen covered with icefield not more than two per cent water. Ice is slob and pans are very small. The ice along the shore is very thin and in the majority of places unsafe for landing. The numerous inlets from Burwell to Cape Kattatok are beginning to break up where they empty into Ungava bay. At Cape Kattatok there are a few leads very small. Atlantic south of Cape Chidley open water with exception of one icefield approximately forty miles east of Eclipse harbour. North of Cape Chidley Atlantic entirely covered by ice-field in that area under observation. Gray strait and entrance to Hudson Strait packed. Gray strait five per cent water, entrance to Hudson strait ten per cent water. All ice observed was slob in very small pans. Open water in Atlantic was absolutely clear of ice.

Ice in main harbour is now broken well in beyond beacon erected by

Captain Bernier.

Time in air—2 hours.

May 22, 1928

Air Patrol No. A-34.

Route of Patrol—south along east coast Ungava Bay to Omanek, thence northeast to Atlantic, to Cape Chidley, Gray straits and Button islands to Base. Visibility at 4,400 feet—north and west sixty miles, east fifty miles, south

twenty miles.

Ungava bay west and northwest of Burwell 30 per cent water. Along coast to Omanek many leads, large two hundred yards square. To west of Omanek ice appears to be packed, no open water observed there or to the south and southwest. Atlantic—south of Atlantic entrance to McLennan strait, open water north to a point approx. ten miles southeast of Resolution island large ice-field which extends to east as far as could be seen. North and northwest to Resolution island open water. Entrance to Hudson straits fifty per cent open water. Gray straits forty per cent open water. Open water between Button islands. All ice observed was of this years, in very small pans and appeared to be very thin.

Time in air—1 hour 5 minutes.

May 25, 1928

Visibility 20 miles.

Water on ice. Ice in straits seventy per cent, balance open water. The ice is light, of this year and loosely packed.

May 26, 1928

Visibility 30 miles.

Water on ice. Ungava bay and Hudson straits clear of ice with exception of icefield approximately three miles square about ten miles from shore. Mission cove broken up.

May 27, 1928

Visibility fifty miles.

Ungava bay clear of ice. Straits 60 per cent water, balance slack ice in very small pans. No heavy ice observed.

May 28, 1928

Visibility 30 miles.

Ice in Mission Cove and Fox harbour breaking up. Ice in straits slack ice in very small pans. At 10 a.m. straits and Ungave free of ice, at 4 p.m. Ungava bay free of ice, Hudson Strait 80 per cent open water, balance ice as above.

May 29, 1928

Visibility 40 to 20 miles.

Straits slack ice in very small pans 40 per cent, balance open water. Ungava Bay free of ice. Ice in Mission Cove and Fox harbour is practically covered with water and slush.

May 30, 1928

Visibility 20 miles, low.

Ice at entrance to Fox harbour has broken away as far in as the Observation house and cracks are very numerous through what ice is left. At the bar between the Mission Cove and Fox harbour ice is badly broken up on both sides. Main harbour is now broken up in as far as a line due east from Beacon erected by Captain Bernier. All ice is covered with slush and water. In the narrows between Mission Cove and Main harbour the ice is now very dangerous, in some cases it has gone down to a matter of only a couple of inches. Ungava bay clear of ice. Straits to west of Burwell clear of ice. To the north in the vicinity of Gray straits ten per cent slack ice.

May 31, 1928

Visibility 30 miles, low.

Ungava Bay and straits entirely free of ice.

#### June 1, 1928

Visibility ten miles to nil.

Straits and Ungava bay have just a few pieces of ice apparently broken off from what is left along the shore.

#### June 3, 1928

Visibility 20 miles.

Straits absolutely free of ice with exception of along coast where only few small pans, apparently from ice in bays and small inlets.

#### June 4, 1928

Visibility 15 miles.

Main harbour clear of ice outside of anchorage occupied by "Canadian Raider" last fall. Straits free of ice except along shore where collar ice is now breaking away.

Natives report Atlantic free of ice.

#### June 5, 1928

Visibility ten miles.

Straits free of ice except along shore, small pans apparently broken away from collar ice.

#### June 6, 1928

Visibility ten miles.

Straits and Ungava bay free of ice excepting where ice is breaking away. Main harbour, Fox harbour and Mission cove further broken up to-day.

#### June 7, 1928

Visibility 20 miles.

Ice is badly broken up around starboard side of *Raider* (H. B. Cove) and in Mission Cove and Fox harbour ice is broken, there being approximately 30 per cent water. Main harbour the ice is gradually breaking away and has now reached the stage where it would be no difficulty for any ship to force a passage through. Straits and Ungava Bay free of ice except along shore where there are small floes of ice apparently shore ice breaking away.

#### June 8, 1928

Visibility 40 miles.

Ice in straits and Ungava Bay unchanged only few small pans along shore.

## June 9, 1928

Visibility 40 miles.

Straits and Ungava bay pans of ice along shore and these very small.

#### June 10, 1928

Visibility 20 miles.

Ice in Main harbour and Fox harbour breaking away rapidly. Ice in Mission Cove broken up and rotten. Straits and Ungava bay small floes approximately 100 yards long, very narrow along shore. On the horizon ice could be seen but unable to distinguish its nature.

#### June 12, 1928

Visibility 40 miles.

Straits and Ungava bay since 5 p.m. clear of ice before that time only isolated pans floating close to shore.

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June 13, 1928

Visibility 40 miles.

Straits and Ungava bay clear of ice with exception few isolated pans. Fox harbour ice has gone out as far in as hangars. Mission Cove broken up, approximately 30 per cent water. Main harbour ice is breaking away.

June 14, 1928

Visibility 40 miles.

Straits and Ungava bay clear of ice with exception few isolated pans along coast. Mission Cove is now 50 per cent water.

June 15, 1928

Visibility 40 miles.

Mission cove ice gradually working over bar into Fox harbour to the straits. Main harbour has shown no appreciable difference to-day. Straits and Ungava bay clear with exception large ice field approximately five miles long on the horizon.

June 16, 1928

Visibility ten miles to two.

Straits and Ungava bay clear of ice with exception of some small isolated pans.

June 17, 1928

Visibility 15 miles.

Strait and Ungava Bay clear of ice with exception of small isolated pans along coast, apparently from what is left of collar ice and that moving from

bays and streams emptying into them.

Main harbour has broken up more to-day and ice has drifted out in large quantities. Mission Cove is slightly jammed with large pieces from Main harbour but with high tide this evening hope to clear same in order that Fox Harbour can be made ready for flying from.

June 18, 1928

Visibility 30 miles.

Mission Cove practically clear of ice with exception of few small pans. Main harbour should clear with the evening tide at the latest with the morning tide to-morrow

Straits and Ungava bay clear of ice.

June 20, 1928

Visibility 40 miles.

Fox harbour free of ice with exception of few small pans which came over the bar from Mission Cove. Mission Cove practically clear of ice with exception of small, cove where motorboat is beached. Main harbour, the ice is rapidly being broken up. Next strong northerly wind should clear it all away.

June 21, 1928

Visibility nil to 20 miles.

Straits and Ungava bay clear of ice. Collar ice is breaking away from shore in Mission Cove and Fox harbour.

June 22, 1928

Visibility 40 miles to nil.

Ice in straits, south—open water; west large field from approx. 15 miles off shore stretching to horizon; northwest, 90 per cent open water for quarter

mile off shore, then thinly packed ice field approximately quarter mile wide. Open water with occasional ice pan over balance of area under observation. Owing to distance ice off shore impossible to judge whether this ice is heavy winter drift ice or not.

June 23, 1928

Visibility five miles to nil.

Straits loosely packed approximately 60 per cent open water, with lead from the north, extending south beyond Burwell approximately three miles off shore. Ice in straits and that which has come in to Fox harbour appears to be heavy winter drift ice. Mission Cove and Fox harbour filled with floe ice to-day Mission Cove from Main harbour and Fox harbour from straits. This ice is clear and heavier than we have had for over two weeks.

June 24, 1928

Visibility 30 to 15 miles.

Fox harbour clear of ice. Main harbour and Mission Cove loosely packed

with small pans.

Straits—southwest—85 per cent open water. Ten miles from shore thinly packed ice floe approximately two miles wide. Near shore isolated drifting pans. West—90 per cent open water, 2 miles from shore loosely packed ice field approximately half mile wide. Northwest—70 per cent open water. Near shore small drifting ice floes 10 miles off shore thinly packed ice field extending to the horizon.

All ice with exception of that in Main harbour and Mission Cove appears to

be heavy drift ice.

Natives came through McLennan straits to-day in a small motorboat and report that Atlantic free of ice with exception of isolated icebergs.

June 25, 1928

Visibility 30 to 20 miles.

Straits—south—80 per cent open water, small drifting pans over whole area, southwest—50 per cent open water. Ten miles from shore thin ice field stretching to horizon. West—80 per cent open water, drifting pans over area. North—90 per cent open water. Drifting pans over area.

June 26, 1928

Visibility 30 miles.

Fox harbour filled with heavy winter drift ice from straits preventing

launching of aircraft.

Straits—90 per cent open water small thin drifting floes from shore to horizon. Southwest—thinly packed icefield to horizon. West—60 per cent open water. Open water on horizon, thinly packed icefield to horizon. Northwest—90 per cent open water. Drifting ice floes from shore to horizon.

June 27, 1928

Visibility 40 miles.

Main harbour is now clear. Fox harbour still considerable ice. Straits south—open water. Southwest—95 per cent open water. Three miles off shore thin ice floes approximately two miles wide. Northwest and north—90 per cent open water. Thirty miles off shore thin ice field to horizon. Ice appears to be heavy winter drift ice, but owing to distance off shore impossible to state accurately.

June 28, 1928

Visibility 20 miles.

Fox harbour clear of ice with exception of small cove in front of hangars but expect this to clear this evening. Straits and Ungava free of ice, with exception of one large ice field sighted on horizon.

June 29, 1928

Visibility 30 miles.

Straits, Ungava bay and Main harbour free of ice. Mission Cove 50 per cent open water, expect it to clear with the tide this evening or to-morrow morning. Fox harbour clear with exception of small cove in front of hangars where some fairly large pieces too big to tow away with dory.

June 30, 1928

Visibility 30 miles.

Main harbour, Fox harbour and straits clear of ice.

July 2, 1928

Air Patrol No. A-35. Route of patrol—local. Visibility 40 to 50 miles.

No ice observed.

Time in air—40 minutes.

July 3, 1928

Air Patrol No. A-36.

Route of Patrol—base to Button islands, east off Button islands for approximately 10 miles, thence southwest to base.

Visibility—north, south and east 50 miles—west 30 miles.

East of Resolution island 8 or 10 bergs, straits, entrance to straits, Gray straits and Ungava Bay clear of ice.

July 4, 1928

Visibility 15 miles.

No ice.

July 5, 1928

Air Patrol No. A-37.

Route of patrol—over Button islands to Cape Chidley and over McLellan straits to base.

Visibility over whole area—sixty miles.

Many icebergs sighted south down and near the Labrador coast also a few isolated ones farther out to sea in same vicinity. No other ice seen.

Time in air—1 hour.

July 6, 1928

Air Patrol No. A-38.

Route of patrol—north northeast to Button islands, north to Resolution, around coast of Resolution island in vicinity of Acadia cove and Hatton headland.

Photographic flight.

Visibility—60 miles, to poor.

Due west of Burwell a large icefield was observed approx. twenty miles out to sea and approximately 40 miles long. A large number of icebergs were observed off Hatton headland within a mile of the shore. Four very large bergs were observed to the northwest of Resolution island approx. five miles off shore.

Time in air-3 hours 20 minutes.

July 7, 1928

Air Patrol No. A-39.

Route of patrol—north to Button islands, southwest into Ungava bay to abeam of Omanek and return to base.

Visibility north 20 miles, west 30 miles, south sixty miles and east nil.

Ice field approximately fifteen miles off shore west of Omanek, very loosely packed and in small pans. This icefield in the shape of a half circle and stretched as far south as could be seen. From a narrow wedge shape at the northern end to at the widest part approximately five miles wide.

At a distance of approximately forty miles off shore large icefield stretching to horizon. Owing to distance off shore unable to observe condition of ice in this

field. North in straits and Atlantic entrance to straits clear of ice.

Time in air-45 minutes.

July 8, 1928

Air Patrol No. A-40.

Route of patrol—west twenty miles, north twenty-five miles and return to base.

Visibility—approximately ninety miles.

West of Port Burwell two small icefields were observed five miles out from shore and approximately two miles apart. These two fields were approximately ten miles long and a quarter of a mile wide. On the horizon due west there is a large ice field about forty miles long apparently thickly packed. Due south another ice field about fifteen miles from shore thinly packed. There was no ice near the shore. No ice was observed to the north or northeast. Many icebergs were observed off Hatton headland on Resolution island within a quarter of a mile of the shore. Two large icebergs were observed in the Atlantic about forty miles from shore. Numerous icebergs were observed evenly spaced down the Labrador coast as far as visibility extended.

Time in air-45 minutes.

July 10, 1928

Patrol report No. A-41.

Route of patrol—west of Burwell 10 miles, south 6 miles, west 15 miles, southeast 90 miles to Cape Kattatok, north 90 miles to west of Port Burwell, northeast 20 miles to Button islands, thence south to Base.

Visibility 90 miles.

Due west of Burwell ice 2 miles off shore in small pans, very loosely packed. From line due west Burwell south in Ungava Bay sixty per cent ice loosely packed, pans small and some slightly rafted. Northwest of Burwell clear of ice. On horizon vicinity Akpatok island, ice appears to be very heavily packed. All ice of the winter variety and in small pans. East of Resolution island number of bergs sighted. Atlantic clear of ice with exception of icebergs reported east of Resolution and approximately a dozen small bergs along Labrador coast.

Time in air-2 hours 10 minutes.

July 11, 1928

Visibility 15 miles.

Straits and Ungava bay seven miles off shore ice field stretching to horizon, very loosely packed. This in a southwesterly direction. South visibility 10 miles isolated pans only in this area. North 60 per cent open water, loose pans only in this area. Balance 80 per cent open water with loose pans only. Main harbour 50 per cent open water. All ice in small pans.

July 12, 1928

Visibility—nil.

Main harbour and Mission cove 70 per cent drift ice, pans small. Fox harbour isolated pans only.

July 13, 1928

Visibility south 15 miles—west 30 miles, southwest 15 miles, northwest 15 miles.

South 30 per cent open water, thickly packed icefields to horizon. West—open water 95 per cent. Only isolated pans in this vicinity. Southwest—open water 60 per cent; 10 miles from shore thickly packed icefields to horizon. Northwest—open water 80 per cent, small icefields and two icebergs observed in this area. All ice appears to be heavy winter drift ice and in some cases considerably rafted. Main harbour and Mission Cove 50 per cent open water.

July 15, 1928

Visibility five miles.

Ice condition in Main harbour and Mission cove same as on 13th. Fox harbour clear of ice with exception of entrance where six or eight small pans. Straits 70 per cent open water, balance ice in small pans scattered over entire area under observation.

July 16, 1928

Visibility 3 miles.

Mission Cove 80 per cent ice, Main harbour 40 per cent ice. Fox harbour 10 per cent ice, entrance to Fox harbour completely blocked. Straits 15 per cent slack ice. All pans small loosely packed.

July 17, 1928

Visibility 5 miles.

Fox harbour 60 per cent ice. Main harbour and straits 50 per cent ice

small pans and very loosely packed. Mission cove 70 per cent ice.

Ice conditions at Port Burwell while unfit for flying are reported by Mr. Ford (Manager of Hudson Bay Company Post) as being as well advanced as in any previous year. Mr. Ford has spent seven years at Port Burwell.

July 21, 1928

Visibility 40 miles.

Ice in Fox harbour prevented flying. Straits—south and southwest clear of ice, west southwest 40 per cent open water, 3 miles off shore thinly packed icefield to horizon. West 80 per cent open water, 3 miles off shore thinly packed narrow icefield. Northwest 90 per cent open water, 3 miles off shore thinly packed narrow icefield. Main harbour 70 per cent open water. Mission Cove 70 per cent ice, thickly packed, through which it is impossible to make way through with any type of boat. Fox harbour only isolated pans, ice having cleared out this afternoon. All ice with exception of few icebergs apparently in small pans and very loosely packed.

July 23, 1928

Visibility 30 miles.

Ice in Fox harbour—no flying. Main harbour 80 per cent open water. Mission Cove 50 per cent open water. Ice field approximately 4 miles off shore about half mile wide. The ice lightly packed and pans appear to be small. Two icebergs sighted approximately 10 miles due west of Burwell. Open water in straits 80 per cent. All ice small pans.

July 24, 1928

Visibility 25 miles to nil.

Fox harbour, cleared some ice from foot of slipway. Main harbour clear of ice. Mission cove 50 per cent ice in small pans, straits clear of ice with exception of isolated small bergs.

July 25, 1928

Visibility 15 miles, low.

Main harbour clear of ice. Mission cove 80 per cent open water. Fox harbour clear of ice with exception of small cove in front of hangars around slipway. Small icefield reported by Nascopie on horizon, loosely packed.

July 26, 1928

Visibility 15 miles.

Straits and Ungava bay clear of ice. Main harbour, Mission Cove and Fox harbour clear of ice with exception of small pans.

July 27, 1928

Visibility 15 miles to nil.

Straits, Main harbour and Fox harbour clear of ice. Mission Cove small pans along shore.

July 28, 1928

Visibility 10 to 20 miles, low clouds. No ice within range of visibility.

August 6, 1928

Air Patrol A-42.

Route of Patrol-north to within ten miles of Resolution island, west five miles, southeast to Button islands, southwest to base.

General visibility 40 miles except to northwest where visibility not more

than 10 miles. Storm working southeast.

Ungava and Atlantic clear of ice. Atlantic north of Cape Resolution only isolated icebergs. Hatton Headland to Lower Savage island clear of ice, also Gabriel strait. Hudson Strait only isolated icebergs.

Time in air-1 hour 15 minutes.

# ICE CONDITIONS AS OBSERVED FROM GROUND IN FALL OF 1928

November 12, 1928

Nottingham island (B).—Small pans of ice reported.

November 13, 1928

Nottingham island (B).—Few small pans drifting.

November 14, 1928

Nottingham island (B).—Few scattered pans of ice.

November 15, 1928

Nottingham island (B).—Few scattered pans of ice.

November 16, 1928

Nottingham island (B).—No ice in sight (Vis. 15 miles).

November 17, 1928

Nottingham island (B).—No ice in sight (Vis. 20 miles).

November 18, 1928

Nottingham island (B).—Large icefield reported.

November 19, 1928

Nottingham island (B).—Large icefields, several icebergs.

November 20, 1928

Nottingham island (B).—Icefields increasing.

November 21, 1928

Nottingham island (B).—Icefields greatly increasing and hummocky.

November 22, 1928

Nottingham island (B).—Ice conditions same as 22nd, ice reported as coming from Fox Channel.

November 23, 1928

Nottingham island (B).—Ice 50 per cent; water 50 per cent.

November 24, 1928

Nottingham island (B).—Ice 50 per cent; water 50 per cent. Southern

half of strait packed.

Port Burwell (A).—Some slob ice.

November 25, 1928

Nottingham island (B).—Ice greatly increased, some leads. Cape Hopes Advance.—Considerable slob ice.

November 26, 1928

Nottingham island (B).—Ice 50 to 75 per cent. Cape Hopes Advance.—Much slob ice.

November 27, 1928

Nottingham island (B).—Ice same as on 26th. Cape Hopes Advance.—Slob ice to horizon.

November 28, 1928

Nottingham island.—Ice varying from 40 to 75 per cent—small bergs. Cape Hopes Advance.—Ice fields reported to horizon.

November 29, 1928

Cape Hopes Advance.—Large pans of ice drifting eastward. Port Burwell (A).—Harbour and Mission Cove frozen over.

 $November\ 30,\ 1928$ 

Nottingham island (B).—Forty per cent ice in sight, many leads. Cape Hopes Advance.—Heavy close packed ice in all directions. Port Burwell (A).—No drift ice in sight.

December 1, 1928

Nottingham island (B).—About 80 per cent ice. Cape Hopes Advance.—Ice fields in all directions.

December 2, 1928

Nottingham island (B).—Eighty per cent ice, some hummocky—some leads.

Cape Hopes Advance.—Icefields to extent of visibility.

December 3, 1928

Cape Hopes Advance.—Heavy drift ice to extent of visibility.

December 4, 1928

Cape Hopes Advance.—Ice fields in all directions. Port Burwell (A).—Fresh water ice 16 inches thick.

December 5, 1928

Nottingham island (B).—Ninety per cent ice. Channel between Digges island and mainland appears clear.

Cape Hopes Advance.—Only 30 per cent ice in sight.

Port Burwell.—Salt water ice 7 inches thick.

December 6, 1928

Nottingham island (B).—80 per cent ice.

Cape Hopes Advance.—Heavy close packed ice as far as can be seen.

December 7, 1928

Cape Hopes Advance.—Heavy ice as far as can be seen.

December 8, 1928

Cape Hopes Advance.—Ice 80 per cent.

December 9, 1928

Cape Hopes Advance.—Open ice in all directions.

Port Burwell (A).—Newly formed closely packed ice as far as can be seen.

December 10, 1928

Nottingham island (B).—95 per cent ice, hummocky ice.

Port Burwell (A).—Closely packed ice into Ungava Bay as far as can be seen.

December 11, 1928

Nottingham island (B).—95 per cent ice.

Cape Hopes Advance.—75 per cent ice in sight.

December 12, 1928

Cape Hopes Advance.—Ice conditions same as on 11th.

December 13, 1928

Cape Hopes Advance.—Ice field packed closely around coast with few leads.

December 15, 1928

Nottingham island (B).—75 per cent ice in sight. Digges island to main-

land appears to be full of ice.

Cape Hopes Advance.—Heavy closely packed ice in all directions.

Port Burwell (A).—Light packed ice in all directions.

December 16, 1928

Nottingham island (B).—90 per cent ice.

Cape Hopes Advance.—Closely packed ice in all directions.

Port Burwell (A).—Fresh water ice 20 inches thick. Salt water ice 18 inches thick.

December 17, 1928

Nottingham island (B).—Ice conditions same as on 16th.

Cape Hopes Advance.—40 per cent ice in sight.

December 18, 1928

Cape Hopes Advance.—90 per cent ice.

December 21, 1928

Cape Hopes Advance.—Heavy closely packed ice everywhere.

December 22, 1298

Nottingham island (B).—95 per cent ice. Cape Hopes Advance.—95 per cent ice.

December 23, 1928

Cape Hopes Advance.—95 per cent ice.

December 24, 1928

Cape Hopes Advance.--Heavy closely packed ice everywhere.

December 25, 1928

Cape Hopes Advance.—Heavy closely packed ice everywhere.

December 26, 1928

Cape Hopes Advance.—No open water in sight.

December 27, 1928

Cape Hopes Advance.—Closely packed ice everywhere.
Port Burwell (A).—Packed ice everywhere, no open water in sight.

December 28, 1928

Cape Hopes Advance.—95 per cent ice.

December 29, 1928

Nottingham island (B).—80 per cent ice.

December 30, 1928

Cape Hopes Advance.—Heavy closely packed ice everywhere.

December 31, 1928

Cape Hopes Advance.—Ice conditions same as on 30th.

Port Burwell (A).—Clear water as far as can be seen into Ungava Bay.

# APPENDIX No. 10

# METEOROLOGICAL OBSERVATIONS—BASE "A"

OCTOBER, 1927

,	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				miles	miles				inches		inches	
13 14 15 16 17 18 19 20 21 22 22 23 24 25 26 27 28 29 30	34 · 8 43 · 0 37 · 7 35 · 6 34 · 4 39 · 3 39 · 1 40 · 0 39 · 8 30 · 1 31 · 8 30 · 7 29 · 2 30 · 5 30 · 6 30 · 6 30 · 8 30 · 8 30 · 7 20 · 6 30 · 6 30 · 6 30 · 7 20 · 7	30·0 38·5 32·0 30·6 30·1 28·8 33·5 32·4 34·1 27·8 27·7 27·1 27·1 27·9 28·1 24·5	NE. SE. NW. W. SW. SW. E. NE. NE. NE. NW. SW. NW. NW. NW.			29.99 29.76 29.83 29.86 29.86 29.67 29.67 29.67 29.89 29.80				33-0		

#### NOVEMBER, 1927

	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt V	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
	•				Miles				Inches		Inches	
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	33·2 45·8 34·0 58·3 51·2 47·2 47·2 27·5 28·8 24·1 23·0 26·1 23·2 24·2 28·6 28·2 22·1 20·3 20·0	$\begin{array}{c} 27 \cdot 8 \\ 29 \cdot 8 \\ 29 \cdot 8 \\ 31 \cdot 5 \\ 32 \cdot 7 \\ 36 \cdot 1 \\ 37 \cdot 9 \\ 36 \cdot 1 \\ 33 \cdot 9 \\ 27 \cdot 1 \\ 23 \cdot 1 \\ 23 \cdot 0 \\ 24 \cdot 2 \\ 19 \cdot 3 \\ 20 \cdot 4 \\ 15 \cdot 4 \\ 15 \cdot 4 \\ 15 \cdot 4 \\ 15 \cdot 5 \\ 16 \cdot 5 \\ 17 \cdot 2 \\ 11 \cdot 4 \\ 19 \cdot 6 \\ 15 \cdot 5 \\ 15 \cdot 5 \\ \end{array}$	SW. E. SW. SW. W. W. W. NW. E. NE. SW. NW. E. SW. SW. NW. E. SW. W. NW. E. SW. SW. SW. SW. SW. SW. SW. SW. SW. SW	29 30 40 33 16 37 48 25 21 26 31 33 39 35 34 22 21 8 22 22 24 25 21 21 21 22 21 21 21 21 21 21 21 21 21	7 8 24 8 5 1 119 3 22 15 18 5 12 20 24 117 8 8 8 0 9 10 16 6 7 7 5 7 1 6 6 23 5 1	29.34 29.67 29.28 30.07 29.69 30.03 29.49 29.58 29.49 29.91 29.93 29.65 29.89 29.90 29.97 30.30 29.99 29.97 20.97	29.65 29.74 29.75 30.00 29.47 29.43 29.96 29.85 29.96 29.06 29.06 29.07 29.87 29.87 29.99 29.91 30.19 29.70 29.72 29.69 29.67 29.89 29.67 29.89 29.67 29.89			34 32 32 31 31 31 31 29 29 29 29 29 29 29		Snow flurries during day. Snow. Snow. Slob ice forming. Blizzard.

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#### DECEMBER, 1927

	Air 7	Temp.		Wind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2	$\begin{array}{c} 22 \cdot 7 \\ 21 \cdot 7 \end{array}$	15·0 7·0	S. SW.	31 46	7 27	29·19 29·01	28·89 29·49			29 29		Mission Cove frozen
3 4 5	$ \begin{array}{c c} 8 \cdot 2 \\ 15 \cdot 1 \\ 14 \cdot 0 \end{array} $	4·5 5·8 0·2	SW. SW. SE.	42 38 30	28 35 0	29·70 29·80 29·69	29·71 29·87 29·37			Con- stant		Harbour frozen over
6	19·8 10·5	5·6 0·2	S. E.	33 37	2 22	$28 \cdot 98 \\ 29 \cdot 52$	29·13 29·\$5			at above		
8 9 10	18·0 29·5 — 3·1	$ \begin{array}{r} -7.5 \\ -3.5 \\ -16.4 \end{array} $	E. SW.	58 41 38	3 13 21	$   \begin{array}{r}     30 \cdot 29 \\     28 \cdot 98 \\     29 \cdot 66   \end{array} $	$   \begin{array}{r}     29.66 \\     29.39 \\     29.70   \end{array} $			figr to Dec. 31	3-9" 4"	
11 12	$     \begin{array}{r}       -8.8 \\       -4.0     \end{array} $	$-14.5 \\ -9.8$	SE.	21	9	$29.84 \\ 29.97$	$29.87 \\ 30.07$			Dec. 51	9"	
13 14 15	$     \begin{array}{r}       -0.8 \\       13.9 \\       35.8     \end{array} $	- 8·4 - 1·5 13·9	E. SE. SE.	5 18 24	0 0 1	$   \begin{array}{r}     30.16 \\     29.90 \\     29.90   \end{array} $	$   \begin{array}{r}     30 \cdot 13 \\     29 \cdot 83 \\     29 \cdot 96   \end{array} $				16" 8-24"	
16 17	$\frac{26 \cdot 1}{27 \cdot 9}$	18·0 17·6	SW. NE.	15 17	0	$30.14 \\ 30.15$	$30.23 \\ 30.12$					
18 19 20	28·6 28·8 27·6	25·8 26·7 25·9	NE. NE. NE.	32 26 21	10 13 9	$30.05 \\ 30.03 \\ 30.06$	$   \begin{array}{r}     30.00 \\     30.02 \\     30.04   \end{array} $					TT11 1 0
21 22	28·8 31·8	$\begin{array}{c} 21 \cdot 0 \\ 21 \cdot 2 \end{array}$	SE. SE.	10	0	$30 \cdot 01 \\ 29 \cdot 90$	29·98 29·84					Heavy black fog over straits. Foggy all day.
23 24 25	$   \begin{array}{r}     32 \cdot 0 \\     26 \cdot 2 \\     6 \cdot 2   \end{array} $	$ \begin{array}{r} 24.5 \\ 6.0 \\ -7.2 \end{array} $	SW. SW. W.	17 26 24	15 15	29.81 $29.77$ $30.29$	$   \begin{array}{r}     29.78 \\     29.96 \\     30.43   \end{array} $					- 263
26 27	6·3 2·8	$-10 \\ -2.8$	SE. SW.	18 12	0	$30.10 \\ 29.59$	29·82 29·43					
28 29 30	7·2 1·8 13·1	$ \begin{array}{r} 1 \cdot 1 \\ -11 \cdot 1 \\ -11 \cdot 1 \end{array} $	NW. SW. NE.	27 25 28	8 4 0	29 · 64 30 · 15 29 · 98	29·94 30·15					
31	9.5	-3.8	NE.	25	9	29.98	29·93 29·94					

#### JANUARY, 1928

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Air Temp.	Wind		Baro	meter	Fresh	Water	Salt	Water	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ate	Max. Min.	Dir. Max.	Min.	8 a.m.	8 p.m.	Temp.		Temp.		Remarks
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	123456789101123144567819012223445678111231145678111111111111111111111111111111111111	- 0.8 -14.0 19.7 -13.5 11.0 -15.0 -12.5 -19.1 -13.0 -22.3 -17.8 -23.4 -14.4 -19.8 -1.4 -19.8 -1.4 -19.8 -1.4 -19.8 -1.4 -19.8 -1.3 -6.2 0 -7.1 -5.1 -13.9 10.3 -11.2 10.3 -11.2 10.3 -11.2 -1.2.0 -21.2 -9.1 -15.9 -0.2 -17.0 -0.3 -8.9 -5.2 -16.1 9.9 -16.5 15.2 -3.0 -1.8 -1.9.1 -1	Miles   W.   13   NE.   42   SW.   40   SW.   23   SW.   26   NW.   32   SW.   29   SE.   20   W.   18   SE.   16   SE.   15   SW.   25   SW.   23   SW.   25   SW.   25   SW.   25   SW.   27   SW.   31   SW.   47   SW.   37   SW.   38   37   SW.   37   SW.   37   SW.   37   SW.   38   37   SW.   37   SW.   38   37   SW.   38   38   38   38   38   38   38   3	Miles  0 12 17 9 0 12 15 18 10 12 8 1 10 19 17 11 9 18 2 0 31 29 26 1 11	29 · 90 28 · 68 29 · 41 29 · 68 29 · 53 29 · 66 29 · 79 29 · 89 29 · 54 29 · 63 29 · 54 29 · 63 29 · 37 29 · 39 29 · 30 29 · 30 20 · 3	29 · 64 28 · 78 29 · 63 29 · 63 29 · 53 29 · 71 29 · 84 29 · 91 29 · 51 29 · 64 29 · 52 29 · 90 29 · 49 29 · 31 29 · 52 29 · 62 29 · 63 29 · 64 29 · 52 29 · 64 29 · 54 29 · 54 29 · 52 29 · 64 29 · 54 29 · 74 29 · 74 29 · 74		ness Inches 33 33 33 33 33 33 33 33 33 33 33 33 33		ness Inches 1714 18 19 20 21 212 22 222 224 244 244 245 255 255 255 255	

#### FEBRUARY, 1928

	Air T	Cemp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				M les	M les				Inches		Inches	
1 2 3 4 5 6 7 8 9 10 11	$ \begin{vmatrix} -5 \cdot 2 \\ -4 \cdot 2 \\ -7 \cdot 2 \\ -15 \cdot 8 \\ -8 \cdot 3 \\ -9 \cdot 1 \\ 1 \cdot 8 \\ 4 \cdot 5 \\ -2 \cdot 8 \\ -4 \cdot 0 \\ 3 \cdot 8 \\ 1 \cdot 1 \end{vmatrix} $	$\begin{array}{c} -16.5 \\ -16.9 \\ -16.8 \\ -19.0 \\ -16.8 \\ -20.8 \\ -16.8 \\ -3.3 \\ -14.1 \\ -13.8 \\ -6.9 \\ -4.9 \end{array}$	SW. W. SW. SW. SW. NE NW. SW. SW. SW. SW. SW. SW. SW.	24 14 27 23 24 33 25 21 27 18 16	3 0 11 13 13 19 1 8 12 0 4 2	29·68 29·58 29·64 29·78 29·91 29·91 29·68 30·10 30·09 29·99 30·17	$\begin{array}{c} 29\cdot 65 \\ 29\cdot 59 \\ 29\cdot 71 \\ 29\cdot 84 \\ 29\cdot 89 \\ 29\cdot 77 \\ 29\cdot 40 \\ 29\cdot 98 \\ 30\cdot 14 \\ 30\cdot 06 \\ 30\cdot 10 \\ 30\cdot 16 \\ \end{array}$		37 37 37 37 37 37 37 37 37 37		$\begin{array}{c} 26\frac{1}{2} \\ 26\frac{1}{2} \\ 26\frac{1}{2} \\ 26\frac{1}{2} \\ 27 \\ 27 \\ 27 \\ 27 \\ 27 \\ 27 \\ 27 \\ $	Low hanging heavy black fog-to N.  Cove Harbour.
13 14 15 16 17 18	$   \begin{array}{r}     7 \cdot 5 \\     8 \cdot 7 \\     -13 \cdot 5 \\     -11 \cdot 3 \\     -5 \cdot 2 \\     0 \cdot 8   \end{array} $	$\begin{array}{c} -7 \cdot 1 \\ -14 \cdot 8 \\ -16 \cdot 8 \\ -22 \cdot 2 \\ -23 \cdot 6 \\ -11 \cdot 1 \end{array}$	SW. NW. W. SW. SW.	28 31 28 16 8 13	12 15 15 0 0 4	29·80 29·28 29·73 29·94 29·85 29·76	$\begin{array}{c} 29.35 \\ 29.61 \\ 29.91 \\ 29.89 \\ 29.82 \\ 29.66 \end{array}$				34	Cove,
19 20 21 22 23 24 25 26 27 28 29	$ \begin{vmatrix} -4 \cdot 0 \\ -8 \cdot 2 \\ -9 \cdot 4 \\ -17 \cdot 3 \\ -1 \cdot 3 \\ 5 \cdot 8 \\ 4 \cdot 2 \\ -2 \cdot 4 \\ -4 \cdot 6 \\ -2 \cdot 0 \\ 5 \cdot 5 \end{vmatrix} $	$ \begin{vmatrix} -16 \cdot 0 \\ -18 \cdot 6 \\ -17 \cdot 8 \\ -22 \cdot 1 \\ -23 \cdot 3 \\ -1 \cdot 9 \\ -10 \cdot 2 \\ -8 \cdot 5 \\ -7 \cdot 5 \\ -7 \cdot 8 \\ -4 \cdot 2 \end{vmatrix} $	SW. SE. SW. SE. NW. NW. NW. SW. SW. SW.	23 20 29 33 21 18 28 32 29 18 27	0 0 1 21 0 4 6 20 17 3 9	29·51 29·42 29·29 29·67 29·95 29·31 29·13 29·08 29·07 29·24 29·25	$\begin{array}{c} 29 \cdot 47 \\ 29 \cdot 26 \\ 29 \cdot 48 \\ 29 \cdot 97 \\ 29 \cdot 66 \\ 29 \cdot 15 \\ 29 \cdot 17 \\ 29 \cdot 07 \\ 29 \cdot 16 \\ 29 \cdot 25 \\ 29 \cdot 37 \end{array}$					Blustering all day.

#### MARCH, 1928

	ArT	emp.		Wnd		Baro	meter	Fresh	Water	Salt V	Water	
Date	Max.	M n.	Dr.	Max.	M n.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Th ck- ness	Remarks
Date  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19			Dr.  SE. NE. NE. SW. SW. SW. NW. SW. NE. NE. NE. NE. W.		M n.  1 2 20 7 0 5 19 11 13 10 16 0 1 1 13 9 0 6	8 a.m.  29 · 43 29 · 44 28 · 49 28 · 94 129 · 39 29 · 14 29 · 69 29 · 95 30 · 04 29 · 93 30 · 29 30 · 31 30 · 05 30 · 07 30 · 18 30 · 08	29.52 29.10 28.63 29.29 29.49 28.92 29.45 29.84 30.07 30.04 29.78 30.15 30.15 30.23 30.23 30.20 30.20 30.10	Temp.	Inches	Temp. In hes		Remarks
20 21 22	$ \begin{array}{c c}  & 19.8 \\  & 21.1 \\  & 20.8 \\  & -4.1 \end{array} $	$ \begin{array}{c}     3 \cdot 1 \\     2 \cdot 5 \\     -8 \cdot 8 \\     -11 \cdot 1 \end{array} $	W. SW. SW.	13 26 23	2 14 11	29·76 29·18 29·26	29·44 29·29 29·37		54		42	Cove, Harbour.
23 24 25 26 27 28	$ \begin{vmatrix} 0.6 \\ -7.1 \\ 3.9 \\ -5.0 \\ -2.8 \\ 27.0 \end{vmatrix} $	$ \begin{array}{c} -11 \cdot 4 \\ -17 \cdot 0 \\ -11 \cdot 8 \\ -12 \cdot 1 \\ -8 \cdot 2 \\ -3 \cdot 9 \end{array} $	SW. SW. SW. SW. SW. NE.	17 22 39 37 31 42	7 5 18 25 10 0	29·47 29·55 29·44 29·49 29·67 29·61	29·60 29·54 29·45 29·60 29·80 29·30		54		44 61	Cove, Harbour.
29 30 31	31·5 23·9 23·2	11·1 10·5 10·2	E. N. NW.	44 26 15	14 0 6	28·64 29·30 29·57	29·12 29·45 29·60					

APRIL, 1928

	Air 7	Γemp.		Wind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1	12.8	8.2	SW.	Miles 26	Miles 14	29.64	29.61		Inches 54		Inches 45 62	Cove,
2 3 4	$15 \cdot 2$ $24 \cdot 9$ $17 \cdot 1$	$   \begin{array}{r}     8 \cdot 2 \\     6 \cdot 9 \\     -1 \cdot 2   \end{array} $	SW. NE. SW.	23 30 30	9 0 19	$29 \cdot 63$ $29 \cdot 37$ $29 \cdot 67$	$29 \cdot 71$ $29 \cdot 19$ $29 \cdot 92$			29.5	02	harbour.
5 6	10·8 2·3 4·7	$     \begin{array}{r}       -2.5 \\       -5.5 \\       \hline       -8.8     \end{array} $	SW. SW.	20 23 30	11 8	$29.71 \\ 29.90 \\ 30.15$	29·54 30·15 30·00		54		45 62	Cove, harbour.
8 9	$6 \cdot 9$ $17 \cdot 5$	-8·6 -8·7	W NE.	15 30	1 16	29·98 29·68	29·98 29·47		54		45 62	Cove,
10 11 12 13 14	5.8 $15.5$ $26.0$ $35.8$ $36.0$	1.5 4.9 2.8 15.5 17.8	NE. NW. NW. SE. SE.	25 16 16 43 39	12 6 1 3 11	29·60 29·82 29·90 29·90 29·62	$29 \cdot 72$ $29 \cdot 98$ $30 \cdot 05$ $29 \cdot 73$ $29 \cdot 79$					nar bour.
15 16 17 18	19·6 36·5 36·5 35·8	8·0 18·1 33·9 25·8	SW. NE. NE. SE	32 32 33 41	1 8 17 14	$30 \cdot 10$ $29 \cdot 84$ $29 \cdot 49$ $29 \cdot 19$	$30 \cdot 06$ $29 \cdot 63$ $29 \cdot 16$ $29 \cdot 38$		54		44	Cove,
19 20 21 22 23 24 25 26 27 28 29 30	24·3 36·8 36·6 34·8 31·3 34·8 26·8 24·1 26·2 23·8 36·8	18·0 17·4 28·5 23·8 17·6 19·1 22·1 20·0 20·1 16·1 7·2 21·2	SE. NE. N.W. NW. NW. NW. SW. SW. SE.	17 26 31 21 13 7 15 17 32 18 24 20	0 12 1 2 0 1 5 3 5 2	29·54 29·40 29·41 29·76 29·88 29·99 29·88 29·78 29·57 29·62 29·90	29·38 29·47 29·69 29·85 29·92 29·97 29·71 29·56 29·71 29·95				58	harbour.
30	90.9	21.2	SE.	20	2	29.85	29.85		52		43 57	Cove, harbour.

MAY, 1928

	Air 7	Cemp.		Wind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 5 6 7 8	37·8 33·2 37·3 34·8 39·1 37·3 29·3 28·6	$\begin{array}{c} 21 \cdot 2 \\ 24 \cdot 2 \\ 20 \cdot 6 \\ 24 \cdot 5 \\ 31 \cdot 5 \\ 31 \cdot 4 \\ 26 \cdot 5 \\ 24 \cdot 5 \end{array}$	NW. NE. SE. SE. NW. NW. SW.	Miles 5 17 12 18 14 16 18 16	Miles 0 5 0 7 1 0 11 6	29·97 30·23 30·31 30·15 29·88 29·79 29·70 29·38	$30 \cdot 11$ $30 \cdot 27$ $30 \cdot 28$ $29 \cdot 94$ $29 \cdot 92$ $29 \cdot 75$ $29 \cdot 59$ $29 \cdot 30$					Foggy all a.m. Snow and fog. Snow and fog. Snow.
9 10 11 12	34·8 44·4 43·2 31·5	$   \begin{array}{c c}     16 \cdot 8 \\     31 \cdot 6   \end{array} $ $   \begin{array}{c c}     33 \cdot 0 \\     26 \cdot 7   \end{array} $	SW. SE. SE. SW.	19 17 10 20	9 2 0 14	29·33 29·50 29·18 29·43	29·52 29·40 29·21 29·63		54		43 56	Snow early in a.m. Cove, Rain. harbour. Rain. Rain and snow.
13 14 15	26·7 29·3 44·8	$ \begin{array}{c} 20 \cdot 0 \\ 21 \cdot 5 \\ 21 \cdot 5 \end{array} $	SW. SW. SE.	26 23 26 25	12 0 7	29·92 30·15 29·98	30·10 30·13 29·81		54	• • • • • • • •	43 56	Cove, harbour.
17 18 19	35·0 28·3 37·2 43·4	18·7 21·5 24·1	SW. SW. SE.	28 29 22	14 10 1	29 · 86 30 · 00 30 · 02	29·95 30·11 29·76		54	• • • • • • • •		Cove,
21 22 23	43·8 37·2 36·8	30·1 30·4 29·5	SE. SW. NE.	18 14 14 13	$\begin{bmatrix} 2\\0\\1\\6 \end{bmatrix}$	29.56 $29.77$ $29.92$ $30.16$	29.73 $29.77$ $30.10$ $30.21$		54			Cove,
24 25 26 27	39·9 46·4 41·8 42·3	$   \begin{array}{r}     30 \cdot 1 \\     34 \cdot 0 \\     33 \cdot 7 \\     31 \cdot 2   \end{array} $	NW. SE. E.	7 30 22 19	0 1 6 2	30.31 $30.23$ $30.25$ $30.23$	$30 \cdot 28$ $30 \cdot 19$ $30 \cdot 23$ $30 \cdot 17$		53	• • • • • • • • • • • • • • • • • • • •	43	Cove Fresh water
28 29	46·3 42·2	$\begin{array}{c} 28 \cdot 6 \\ 39 \cdot 8 \end{array}$	E. SE.	24 20	0 12	30·14 30·00	30·09 29·84				56	harbour. lakes open. Cove and harbour breaking up.
30	39·5 40·6	34·9 33·5	SE.	34 43	12 16	29·70 29·56	29·65 29·64			••••	40	Cove, Unable to harbour. measure Cove. fresh water harbour. ice.

JUNE, 1928

	Air T	'emp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1	40.5	36.5	E.	29	5	29.70	29.71				39	Cove,
2	39.5	33 · 6	NE.	27	6	29.38	29 · 19				49 38	harbour. Cove, Rain-snow
3	42.2	30.4	NE.	18	2	29.55	29.64				48 10–30	harbour. fog. Cove,
4	39.7	32·5 32·2	NE. SE.	11 8	0	29.55	29·63 29·79				46 42-52	harbour.
5	$34 \cdot 9 \\ 44 \cdot 5$	$\frac{32 \cdot 2}{32 \cdot 7}$	SE.	. 19	0	$29.72 \\ 29.91$	30.04					Fog over hills to east.
7	54 · 1	35.8	NE.	16	1	30.08	29.97				7-24	Over trail on ice from Mission to R.C.M.P.
8	46·1 51·8	35·5 34·3	SE. SW.	15 5	0	$29 \cdot 91$ $29 \cdot 79$	29·81 29·59				7-26	66 66
10	60.3	40.5	SE.	15	0	29.45	29.35					
11	50.7	35.0	E.	23	8	29.32	29 - 47					All ice rotten, breaking
12 13	50·8 46·7	37·9 37·8	SE SE.	22 24	6	29 · 62 30 · 03	29·87 29·90					up.
14	48.3	40.0	SE.	42	13	29.72	29.90					
15	50.4	38 - 1	SE.	32	12	29.74	29.83					
16	42.5	35.6	NE.	24	7	29.97	30.00					
17 18	50·5 53·9	35·9 37·7	NE. NW.	26 16	7 0	$30.07 \\ 30.28$	30·22 30·28	41·0 44·0		33.0		
19	41.3	31.5	SW.	10	0	30.28	30.11	44.0		94.0		
20	41.4	33.5	SE.	11	1	30.03	29.96					
21	38.3	33 · 5	SW.	14	3	29.91	29.88	46.0				Foggy all a.m.
22 23	37·6 35·8	31·5 30·0	SW.	20	0 3	29·82 29·79	29·79 29·86	45 45·0				Foggy most of a.m. Foggy at night.
24	37.0	28.5	SW.	16	2	29.79	29.80	46.0				No fog.
25	53.5	31.8	NW.	6	ő	29.87	29.88	46.0				10108.
26	46.5	33.0	NW.	9	0	29.94	29.94					
27	61.1	36·9 36·2	SW. SE.	32	0	29·85 29·68	29.78 $29.61$	47.0				
28 29	54·5 52·3	41.0	SE.	30	5 11	29.64	29.61	53.0		36.0		
30	58.8	39.5	SE.	29	10	29.84	29.81	53.0		36.0		
		1		1	1	1		1			1	1

#### JULY, 1928

Max.   Min.   Dir.   Max.   Min.   8 a.m.   8 p.m.   Temp.   Theres ness			Water	Salt V	Water	Fresh	meter	Baro		Wind		emp.	Air T	
1     48·9     40·9     SE.     31     9     29·72     29·76     53·0     37·0        2     48·8     38·5     NE.     15     5     29·82     29·88     53·0     39·0        3     51·1     36·5     E.     12     0     29·86     29·72     53·0     37·0        4     45·4     38·2     SE.     27     8     29·60     29·77     53·0     37·0        5     42·8     31·5     NW.     11     4     29·79     29·80       Fog part of s       6     42·23     32·5     SW.     17     4     29·75     29·67     53·0     38·0      Fog part of s       7     56·4     37·0     E.     24     1     29·51     29·40     53·0     37·0        8     56·3     38·0     SW.     15     7     29·61     29·76     53·0     39·0     9       9     38·1     34·0     SW.     19     7     29·68     29·82     53·0     39·0     Fog in a.m.       10     45·3     35·2     SW.     15     4     29·73     29·79     55·0 </td <td>Remarks</td> <td>Rem</td> <td></td> <td>Temp.</td> <td></td> <td>Temp.</td> <td>8 p.m.</td> <td>8 a.m.</td> <td>Min.</td> <td>Max.</td> <td>Dir.</td> <td>Min.</td> <td>Max.</td> <td>Date</td>	Remarks	Rem		Temp.		Temp.	8 p.m.	8 a.m.	Min.	Max.	Dir.	Min.	Max.	Date
15 55.4 40.0 SE. 16 3 29.86 29.83 55.0 32.0 16 70.5 44.7 8. 5 0 29.74 29.54 55.0 33.0 170 64.4 46.5 S. 8 2 29.40 29.32 57.0 34.0 Fog. 18 51.3 41.4 S. 14 1 29.23 29.23 58.0 34.0 Fog. 20 38.0 33.4 SW. 16 7 29.24 29.35 Fog. 20 38.0 33.4 SW. 12 4 29.58 29.72 57.0 33.0 Harbour ful 21 51.6 34.0 S. 12 0 29.73 29.71 57.0 33.0 Fog. 22 50.8 34.6 S. 14 1 29.60 29.74 57.0 33.0 Fog. 23 53.2 34.9 S. 11 2 29.88 29.78 57.0 34.0 Fog part of 23 53.2 34.9 S. 11 2 29.88 29.78 57.0 Short thund 4.30 p.m., 24 65.6 45.8 SW. 21 2 29.60 29.49 Short 57.0 Short thund 4.30 p.m., 25 42.8 37.6 SW. 18 2 29.76 29.90 57.0 36.0 Short thund 4.30 p.m., 25 42.8 37.6 SW. 18 2 29.76 29.90 57.0 36.0 by showe 26 47.3 29.2 NE. 17 0 29.97 30.01 57.0 36.0 Harbour cle	.m. only.  r and cove fu Fog.  full of ice— t of p.m. understorm a m., followed	Fog. Fog. Harbour ful fog. Fog part of Short thund 4.30 p.m., by shower Harbour cle	Inches	37·0 39·0 37·0 37·0 37·0 39·0 39·0 39·0 39·0 36·0 32·0 32·0 34·0 34·0 34·0 34·0 34·0 34·0 34·0	Inches	53 · 0 53 · 0 53 · 0 53 · 0 53 · 0 53 · 0 53 · 0 55 · 0 55 · 0 55 · 0 55 · 0 57 · 0 57 · 0 57 · 0 57 · 0	29.76 29.88 29.72 29.77 29.80 29.67 29.40 29.76 29.72 29.79 29.79 29.72 29.98 29.88 29.83 29.54 29.32 29.23 29.27 29.71 29.71 29.74 29.74 29.75 29.76	29 · 72 29 · 82 29 · 86 29 · 60 29 · 79 29 · 75 29 · 61 29 · 68 29 · 73 29 · 71 29 · 96 29 · 86 29 · 73 29 · 74 29 · 86 29 · 86 29 · 74 29 · 86 29 · 86 29 · 74 29 · 86 29 · 73 29 · 74 29 · 86 29 · 73 29 · 74 29 · 86 29 · 73 29 · 74 29 · 76 29 · 76 29 · 76 29 · 78 30 · 76 30 · 7	Miles 9 5 0 8 8 4 4 4 1 1 7 7 7 4 4 5 8 6 6 7 7 3 0 0 2 1 1 7 7 4 4 0 0 1 1 2 2 2 2 2 0 0 0 0 0 0 0	Miles 31 15 12 27 11 17 24 15 19 15 17 14 12 18 14 11 11 11 18 18 17 14 16	SE. NE. SE. SW. SW. SW. SE. SE. S.	40 · 9 38 · 5 38 · 5 38 · 5 31 · 5 32 · 5 37 · 0 34 · 0 35 · 2 35 · 2 36 · 0 38 · 2 36 · 0 38 · 0 34 · 0 44 · 7 41 · 4 34 · 6 34 · 9 45 · 8 37 · 6 38 · 2 38 · 9 38 · 9 38 · 9 38 · 9 38 · 9 48 · 9 49 · 9 40 · 9	48.9 48.8 51.1 45.4 42.8 42.3 56.3 38.1 40.4 55.4 45.3 40.5 55.4 55.4 50.8	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 6 27 28

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# AUGUST, 1928

Date	Air Tem	perature		Wind		Mean Barom-	Sea-water
Date	Max.	Min.	Direction	Max.	Min.	eter	Temp.
				Miles	Miles		
1	48.0	41.5	NE.	18	10	29.55	
2	47.3	41.0	NE.	18	10	29.70	
ð	50	$47 \cdot 0$	NE.	17	5	29.98	
4	46.8	38.0	NW.	8	0	30.05	
5	44.7	$34 \cdot 2$	S.	10	4	30.08	
6	60.7	$50 \cdot 2$	SE.	8	3	29.89	
7	$55 \cdot 2$	$36 \cdot 5$	SE.	10	0	29.99	
8	56.8	$52 \cdot 0$	SE.	16	5	29.70	
9	50.1	40.5	S.	11	1	29.70	
10	$62 \cdot 6$	$42 \cdot 2$	S.	11	1	29.53	
11	43.9	$39 \cdot 3$	SW.	17	8	29.71	
12	$50 \cdot 4$	$49 \cdot 4$	SW.	15	7	29.87	
13	$47 \cdot 2$	41.5	SW.	30	10	29.65	
14	66.5	$42 \cdot 2$	SE.	18	3	29.68	
15	52.8	38.0	W.	9	3	29.91	
16	44.5	$37 \cdot 4$	NE.	16	4	29.81	
17	49.0	$37 \cdot 7$	S.	9	5	29.85	
18	48.0	$39 \cdot 0$	NW.	19	5	29.85	
19	$52 \cdot 3$	38.5	NW.	8	0	29.82	
20	64.1	$43 \cdot 3$	S.E.	20	2	29.64	
21	46.6	$40 \cdot 2$	W.	21	4	29.94	
22	57.4	$43 \cdot 0$	SE.	48	17	29.52	
23	66.3	41.5	SE.	18	1	29.52	
24 (missing).							
25	$64 \cdot 1$	$40 \cdot 0$	SW.	20	8	29.89	
26	53.7	41.5	SW.	17	7	29.88	
27	44.5	$39 \cdot 2$	SW.	15	6	29.93	
28	58.9	$37 \cdot 3$	NE.	18	1	29.53	
29	$44 \cdot 2$	$32 \cdot 5$	SW.	33	5	28.92	
30	43.2	$33 \cdot 5$	NE.	33	5	29-10	
31	38.8	$36 \cdot 0$	NW.	17	7	29.54	

#### SEPTEMBER, 1928

Date
Date
(missing) (missing)

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Date	Air Tem	perature		Wind		Mean Barom-	Sea-water
35000	Max.	Min.	Direction	Max.	Min.	eter	Temp.
				Miles	Miles		
1 2 3 4 4 5 5 6 6 7 8 (missing) 9 10 11 1 1 1 2 1 3 1 1 4 1 5 (missing) 16 1 7 1 18 19 20 21 22 23 24 25 26 27 28 8 29 30 30 3	38·5 39·8 39·0 36·5 41·4 49·0 40·0 41·0 35·0 - 37·0 30·0 29·0 28·0 31·0 30·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0	33·1 32·1 33·5 32·5 36·0 36·0 33·0 33·0 33·0 31·0 29·0 27·0 17·0 23·0 24·0 21·0 21·0 21·0 22·0 18·0 24·0 23·0 21·0 21·0 21·0 21·0 21·0 22·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 23·0 24·0 21·0	NW. NW. SE. NE. SE. SW. SW. SW. NE. NW. NW. NW. W-NW. W-S. W-S. NW. E-NE. W. NE-W.	26 24 24 14 12 25 25 8 10 10 24 25 28 10 10 24 25 28 10 24 25 28 32 32 12 24 4 25 25 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	13 11 11 2 2 5 5 2 4 7 1 5 9 20 6 6 16 8 8 0 4 4 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	29·72 29·76 29·79 30·18 29·76 29·49 29·66 29·58 29·72 29·79 29·74 29·76 29·83 29·83 29·83 29·83 29·84 29·73 29·83 29·84 29·74 29·73 29·84 29·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85 20·85	36.0

#### NOVEMBER, 1928

Date	Air Tem	perature	M	Vind		Mean Barom-	Sea-water
Date	Max.	Min.	Direction	Max.	Min.	eter	Temp.
1	30·2 27·2 32·4 30·5 34·0 41·3 41·3 38·0 32·4 28·0	29·9 22·5 17·0 27·2 27·0 31·9 33·3 34·4 25·6 25·5	SW-E. NE-E. SE. NE. NE. NE. NE. NE. NW.	Miles  28 20 20 36 44 40 28 10 24 24	Miles  4 4 4 16 22 22 8 8 8 16	29·53 29·31 29·58 29·45 28·99 28·99 29·43 29·60 29·77 29·85	32.0
11 12 13 14 15 16 17 18 19 20 21	31.3 29.6 28.7 28.4 32.8 28.8 28.0 24.9 29.9 23.8 28.9	$ \begin{array}{r}     \hline       27 \cdot 2 \\       19 \cdot 9 \\       21 \cdot 5 \\       16 \cdot 6 \\       23 \cdot 1 \\       24 \cdot 0 \\       21 \cdot 0 \\       20 \cdot 8 \\       13 \cdot 7 \\       16 \cdot 0 \\       16 \cdot 7 \end{array} $	W. SW. E-SW. E. W-N. NW-SW. SW-NW. N-W. N-W. SE-SW. NW.	31 14 16 15 16 20 23 40 38 36 40	12 0 4 2 8 4 4 2 7 9	29.95 $29.88$ $29.74$ $29.75$ $29.98$ $30.06$ $29.56$ $29.71$ $29.52$ $29.09$ $29.35$	32.0
22 23 24 25 26 27 28 29 30	26.8 20.7 20.2 23.5 19.6 18.4 17.4 17.0 19.6	$   \begin{array}{c}     19 \cdot 0 \\     17 \cdot 3 \\     15 \cdot 3 \\     17 \cdot 0 \\     12 \cdot 8 \\     12 \cdot 5 \\     9 \cdot 6 \\     1 \cdot 5 \\     13 \cdot 0   \end{array} $	NW-SW. W. NE-W. W-SW. E. W-SW. NW-S. NW.	20 20 20 23 22 32 32 30 28 36	10 9 2 6 8 4 10 20 8	$29 \cdot 48$ $29 \cdot 47$ $29 \cdot 47$ $29 \cdot 53$ $29 \cdot 67$ $29 \cdot 56$ $29 \cdot 16$ $29 \cdot 20$ $29 \cdot 46$	30.0

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# ${\tt Meteorological\ Observations-Base\ "A"-} Concluded$

#### DECEMBER, 1928

70 (	Air Tem	perature		Wind		Mean Barom-	Sea-wate
Date	Max.	Min.	Direction	Max.	Min.	eter	Temp.
				Miles	Miles		
1	20.8	$6 \cdot 0$	SW-SE.	36	12	29.87	
2	28.4	$7 \cdot 0$	S-SE.	22	4	29.88	
3	22.5	13.5	NW-SW.	28	2	29.76	
1	16.5	9.3	W-SW.	32	12	30.16	
5	21.3	$2 \cdot 5$	SE-E.	28	8	29.98 $29.19$	
5	28.9	15.7	E-W.	12	4	29.19	
7	29.0	16.1	NE-NW. W-SW.	48 36	24	30.03	
3	$\begin{array}{c} 17 \cdot 4 \\ 25 \cdot 9 \end{array}$	$\frac{4.8}{2.9}$	W—SW.	32	3	29.77	
)	23.0	15.7	SW-W.	32	11	29.80	
)	22.2	15.0	W.	20	8	29.89	
2	18.5	11.3	w-sw.	20	4	30.02	
3	$\frac{10.3}{29 \cdot 7}$	10.1	Sw.	26	8	29.47	
	27.3	20.0	NE.	21	4	29.54	
	22.8	13.0	W-NW.	24	4	29.54	
3	20.5	13.6	N-W.	14	2	29.69	
7	22.9	11.5	W-SE.	24	4	29.37	
3	30.4	21.0	E-SW.	30	8	28.99	
9	31.0	$27 \cdot 4$	N-NE.	14	8	28.24	
0	29.3	6.5	W-SW.	48	28	29.11	
1	7.7	-2.7	NE-SW.	52	18	29.53	
2	3.6	3.2	W-SW.	36	9	29.47	
3	6.0	-2.0	W-SW.	36	24	29.49	
<u>4</u>	32.0	12.0	W-SW.	36	12	29.32	
5,	22.0	-7.0 $-13.4$	W-SW.	40	12	29.52	
6	-3.5	-13.4 $-13.0$	SW-W.	40	8	29.74	
7 8	8.5	-6.5	SW-E.	20	0	29.88	
9	$27 \cdot 2$	7.8	E.	40	8	29.63	
0	36.0	26.1	NE.	40	28	29.17	
1	33.6	11.4	NW-N.	40	12	29.22	
1	99.0	11.4	7444 74.	10	12	20 22	

# METEOROLOGICAL OBSERVATIONS—BASE "B"

#### SEPTEMBER, 1927

	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4 5 6 7 8 9	67·1 56·1 48·9 44·1 43·0 56·0 37·0 38·5 39·0 38·9	$32 \cdot 9$ $36 \cdot 0$ $37 \cdot 1$ $34 \cdot 2$ $39 \cdot 9$ $30 \cdot 0$ $27 \cdot 5$ $32 \cdot 0$ $31 \cdot 1$	E. S. SW. SW. W. W. SW. SW.	24 15 14 8 6 7 10 14 8 14	15 4 1 3 1 1 2 1 2 5	29·57 29·48 29·52 29·60 29·82 29·86 30·00 29·94 29·49 29·37	29·35 29·48 29·47 29·71 29·87 29·92 30·04 29·62 29·42 29·43					Rain. Rain and fog. Rain. Rain.—foggy p.m. Foggy in a.m. Slight fog. Rain a.m. and p.m. Rain and fog. Heavy fog a.m. and p.m.
11	39.7	32.0	W.	11	1	29.44	29.51					Fog early a.m., clear- ing later.
12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	44·4 44·8 50·0 55·8 47·2 47·3 47·2 45·0 43·2 48·0 39·5 41·5 40·1 35·3	35.0 31.0 32.0 39.0 37.0 31.5 33.0 37.2 35.0 36.0 34.2 34.1 31.0 28.0	W. NE. NE. NE. NE. NE. NE. NE. NE. NE. NE	17 14 10 14 18 17 23 22 16 17 14 16 17 14 12 11	3 0 1 0 8 10 14 13 12 8 3 5 2 4 3	29·66 29·71 30·01 30·03 29·92 29·70 29·63 29·52 29·42 29·46 29·52 29·64 29·64 29·64 29·64 29·64 29·35	29·80 29·77 30·05 29·92 29·80 29·68 29·62 29·48 29·40 29·46 29·53 29·53 29·64 29·61 29·78 29·31	45·0 44·0 44·0 45·0 39·0 40·0 41·0 38·0 40·0 39·0 39·0 29·0 35·0		38.0 38.0 39.0 41.0 35.0 35.0 35.0 36.0 37.0 36.0 35.0 33.0		Rain in p.m. Rain in p.m. Rain late in p.m. Rain late in p.m. Rain late p.m. Rain showers. Rain-snowflurries. Rain a.m. Snowflurries p.m.
28 29 30	34·0 35·0 33·9	$   \begin{array}{c}     28 \cdot 0 \\     29 \cdot 1 \\     31 \cdot 0   \end{array} $	W. SW. W.	6 3 8	0 0 4	29·67 30·01 30·00	29·87 30·04 29·94	$ \begin{array}{c c} 32.0 \\ 32.0 \\ 32.0 \end{array} $		33·0 33·0 33·0		Showers. Rain and snowflurries.

#### OCTOBER, 1927

	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4 5	31.9 30.5 30.5 32.3 29.8	27·0 27·0 26·0 25·5 25·8	NW. NW. NE. NE.	9 6 13 18 10 14	6 3 2 11 0 3	29·94 30·30 30·16 29·67 29·83 30·03	30·08 30·31 29·92 29·77 30·04 29·93	32·0 32·0 32·0 32·0 32·0 32·0		$ \begin{array}{c} 32.0 \\ 32.0 \\ 32.0 \\ 31.0 \\ 32.0 \\ 32.0 \end{array} $		Slight fall of snow early a.m.
6 7 8 9 10 11	33·7 32·2 39·7 35·1 35·2 31·7	26·5 28·5 28·6 24·0 22·8 25·4	SW. SW. SE. NW. NE.	5 6 3 10 3	0 0 0 0	29·97 29·97 30·11 30·11 30·08	29·96 29·96 30·06 30·15 30·08 30·05	32·0 32·0 32·0 32·0 32·0 32·0	1 1 1½	31·0 32·0 31·0 33·0 30·0		Trace next to shore. Slight fall of snow in a.m.
12 13 14 15 16 17 18	30·9 29·0 29·7 29·0 32·6 34·5 33·8	$25 \cdot 0$ $24 \cdot 7$ $26 \cdot 0$ $26 \cdot 0$ $27 \cdot 6$ $29 \cdot 7$ $29 \cdot 3$	NW. NE. NE. NW. W. SW. SW.	6 16 17 10 23 29 27	2 2 6 3 15 2	30.04 29.93 29.34 29.66 30.18 30.08 29.82	30·02 29·64 29·40 29·92 30·15 30·04 29·92	$     \begin{array}{r}       32 \cdot 0 \\       32 \cdot 0 \\     \end{array} $	2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	30·0 31·0 31·0 30·0 30·0 30·0 31·0		in snow in a,m. in, snow in a.m.  Heavy fog a.m. and p,m., rain in a.m.
19 20 21 22 23 24 25 26 27 28 29 30 31	36·3 36·9 35·0 35·8 33·9 34·0 31·0 29·1 25·7 25·2 28·6	30·7 31·7 32·0 31·2 30·3 27·2 28·0 24·8 20·0 22·0 20·3 16·1 20·0	SE. SE. SE. SE. SE. NE. NE. NW. NE. NE.	15 14 21 20 16 5 6 5 5 5 8 9	6 8 11 8 5 1 2 0 0 0 1 1 1 1	29·76 29·54 29·66 29·71 29·57 29·70 29·80 29·62 29·67 29·80 29·97 29·97 29·97	29·62 29·64 29·69 29·55 29·78 29·72 29·64 29·86 29·98 29·94 29·49	32·0 32·0 32·0 32·0 32·0 32·0 32·0 32·0	00 24 24 50 c0	32·0 32·0 32·0 30·0 31·0 32·0 31·0 30·0 30·0 30·0 29·0 29·0		Slight rain a.m. Slight rain in a.m.  1 in. snow. 1 in. snow. 3 ins. snow. 3 ins. snow.

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#### NOVEMBER, 1927

	Air 7	Γemp.		Wind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 3 4 5 6 7 8 9 10 11 12 13 14	30.0 27.0 27.3 31.4 39.0 37.5 31.0 32.8 24.3 21.9 19.8 18.0 17.9 16.0	26·0 22·9 22·9 24·9 27·0 23·2 31·9 21·8 15·0 13·8 10·0 12·2 12·9	NW. NE. SW. NE. NE. SW. NE. NE. NE. NO. NE. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO	13 23 27 21 28 47 34 15 31 32 19 21 22 14	5 4 20 4 11 9 7 0 10 18 6 3 9 8	29·32 29·38 28·78 29·77 29·26 29·58 29·91 29·17 29·48 29·93 29·59 29·34 29·47	28.84 29.25 29.76 29.95 29.95 29.45 29.30 29.74 29.88 20.37 29.44 29.58 29.99	32·0 32·0 32·0 32·0 32·0 32·0 32·0 32·0	34 455556678889	29·0 29·0 29·0 29·0 29·0 29·0 29·0 28·5 29·5 28·5 28·5 28·5	T. T. T. Slush. Slush. Slush. ice.	Snow. Snow. Snow. Snow 2 ins. Snow—drifting. Snow—drifting. Snow. Snow. Snow. Snow. Snow. Snow. Trace snow.
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	12·3 12·7 7·0 20·5 22·0 22·0 26·0 17·5 6·5 6·0 13·0 15·1 16·9 13·2 16·7 21·8	$\begin{array}{c} 7.5 \\ 6.2 \\ -2.4 \\ -3.8 \\ 12.5 \\ 13.5 \\ 13.0 \\ 3.9 \\ 3.1 \\ -2.6 \\ 9.3 \\ 9.0 \\ 10.6 \\ -2.2 \\ 2.3 \\ 16.2 \end{array}$	NW. NW. SW. SE. E. SW. SE. NE. NW. NW. SE. SE.	19 17 16 21 25 26 23 20 9 16 20 11 15 13 22 26	11 9 7 10 10 3 4 7 2 1 10 5 4 3 4 4 4 4	29·80 29·93 29·82 29·94 29·89 29·43 29·54 29·63 29·97 29·71 29·45 29·24 29·57 29·24 29·38	29.82 29.88 29.90 30.00 29.73 29.63 29.63 29.49 29.39 29.34 29.64 29.63 29.63 29.63	32·0 32·0 32·0 32·0 32·0 32·0 32·0 32·0	$egin{array}{c} 9rac{1}{2} \\ 10 \\ 11rac{1}{2} \\ 12rac{1}{2} \\ 13 \\ 13rac{1}{4} \\ 13rac{1}{4} \\ 14 \\ 14 \\ 15 \\ 16 \\ 18 \\ 19rac{1}{4} \\ 19 \\ 19 \\ 19 \\ 19 \\ 19 \\ 19 \\ 19 \\ 1$	28·2 28·2 28·2 29·2 28·0 28·0 28·0 28·0 28·0 28·0 28·0 28	6 6 3 4 7 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	" " " Snow-drifting. Snow-trace. Snow-trace. Snow-trace. Snow.

#### DECEMBER, 1927

-	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 16 17 18 19 20 21 22 23 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	$\begin{array}{c} 16 \cdot 7 \\ 12 \cdot 3 \\ 5 \cdot 5 \\ 5 \cdot 8 \\ 3 \cdot 8 \\ 9 \cdot 2 \\ 11 \cdot 7 \\ -2 \cdot 0 \cdot 0 \\ 6 \cdot 8 \\ 0 \\ -1 \cdot 0 \\ 6 \cdot 8 \\ 14 \cdot 0 \\ -3 \cdot 0 \\ 12 \cdot 3 \\ 16 \cdot 2 \\ 22 \cdot 1 \\ 22 \cdot 2 \\ 22 \cdot 4 \\ 16 \cdot 6 \\ 13 \cdot 5 \\ 3 \cdot 0 \\ -8 \cdot 7 \\ -7 \cdot 6 \\ -13 \cdot 6 \\ -13 \cdot 6 \\ -11 \cdot 8 \\ -18 \cdot 0 \\ -17 \cdot 0 \\ \end{array}$	$\begin{array}{c} 8 \cdot 3 \\ 0 \\ 0 \\ -7 \cdot 0 \\ -4 \cdot 0 \\ 0 \\ -3 \cdot 0 \\ 5 \cdot 0 \\ -3 \cdot 0 \\ 5 \cdot 0 \\ -3 \cdot 0 \\ -5 \cdot 2 \\ -5 \cdot 2 \\ -5 \cdot 2 \\ -5 \cdot 3 \\ 0 \\ -12 \cdot 2 \\ -12 \cdot 2 \\ -3 \cdot 0 \\ 6 \cdot 2 \\ 11 \cdot 0 \\ 11 \cdot 5 \\ 12 \cdot 1 \\ 6 \cdot 0 \\ -19 \cdot 5 \\ -22 \cdot 4 \\ -21 \cdot 4 \\ -22 \cdot 2 \\ -24 \cdot 2 \\ -24 \cdot 2 \\ -25 \cdot 3 \\ -25 \cdot 0 \end{array}$	SW. SW. SW. NEW. SW. NEW. SE. NE. NE. NE. NE. NE. NE. NE. NE. NE. N	Miles  19 23 22 22 26 19 11 30 32 40 42 25 20 17 11 16 8 8 6 6 11 9 10 16 6 9 9 8 8 12 26	Miles 2 18 9 15 5 1 15 3 14 13 223 12 2 7 7 2 2 2 5 5 4 4 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	29·09 29·09 29·41 29·55 29·40 29·36 30·02 28·71 28·62 29·56 29·68 30·19 30·19 30·19 30·19 30·07 30 30·07 30·	28 · 97 29 · 29 29 · 62 29 · 12 29 · 50 29 · 12 29 · 70 29 · 70 29 · 70 29 · 70 29 · 83 29 · 83 29 · 89 30 · 19 30 · 09 30 · 09 30 · 08 30 · 84 29 · 71 29 · 88 29 · 88 29 · 70 30 · 29 30 · 29 30 · 29 30 · 30 30 · 20 30	32·0 32·0 32·0 32·0 32·0 32·0 32·0 32·0	22 22 24		19	Snow. Snow—drufting. Snow—aurora.  Snow. Snow—drifting. Snow—trace. Snow—blizzard. Snow—drifting. Snow—drifting. Snow—trace. Snow—trace. Snow. S

#### JANUARY, 1928

	Air T	Cemp.		Wind		Baro	meter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 23 22 23 23 23 24 24 25 26 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	$\begin{array}{c} -6\cdot0 \\ -6\cdot0 \\ -6\cdot0 \\ -12\cdot0 \\ -19\cdot5 \\ -19\cdot4 \\ -26\cdot3 \\ -17\cdot0 \\ -16\cdot0 \\ -17\cdot0 \\ -16\cdot0 \\ -17\cdot0 \\ -11\cdot6 \\ -12\cdot2 \\ -5\cdot4 \\ -14\cdot0 \\ -16\cdot2 \\ -9\cdot0 \\ -4\cdot0 \\ -8\cdot3 \\ -16\cdot2 \\ -26\cdot1 \\ -16\cdot4 \\ -15\cdot1 \\ -8\cdot4 \\ -9\cdot6 \\ -11\cdot5 \\ -15\cdot8 \\ -7\cdot6 \\ -7\cdot6$	- 7·0 -19·2 -22·3 -34·0 -33·0 -33·4 -29·0 -27·0 -24·2 -26·2 -16·2 -20·0 -24·1 -20·0 -24·1 -21·0 -31·2 -30·5 -20·0 -31·1 -11·0 -11·0 -11·2 -17·2	SW. SW. S. S. S. S. N. W. SW. N. SW. N. W. SW. NE. N. NW. SW. NW. SW. NW. SW. NW. SW. SW. NW. SW. SW. SW.	Miles  20 20 15 9 8 13 16 6 9 10 12 16 15 21 11 13 17 8 10 21 26 25 15 4 14 15 20 18 4	Miles  18 2 9 1 0 1 3 1 0 0 1 1 3 1 1 0 1 1 1 1 2 8 1 1 1 1 3 1 1 1 1 3 9 1 1 1 1	29.49 29.06 29.10 29.19 29.36 29.62 29.62 29.72 29.68 29.55 29.41 28.92 29.08 29.42 28.93 29.13 29.13 29.13 29.13 29.28 29.00 28.83 29.44 29.64 29.66 29.66 29.67 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67 29.68 29.67	29·37 28·97 29·14 29·32 29·51 29·78 30·00 29·85 29·71 29·66 29·24 29·48 29·48 29·48 29·48 29·48 29·48 29·48 29·49 29·48 29·49 29·48 29·49 29·48 29·49 29·48 29·49 29·59 20·59	32.0	26 30 30	28·0 28·0 28·0 28·0 28·0 28·0 28·0 28·0		Aurora. Heavy bank of fog over strait.  Snow drifting. Aurora.  " " " " " " Snow. Snow—trace drifting. Drifting snow. Snow—drifting. Aurora. Aurora. " " " " " " " " " " " " " " " " " " "

#### FEBRUARY, 1928

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Air Te	emp.	,	Wind		Baron	neter	Fresh	Water	Salt '	Water	
1         -12·5         -20·5         SW.         7         2         29·50         29·60	• Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.		Temp.		Remarks
19 - 8·4 -21·2 S. 15 7 29·44 29·33	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	$\begin{array}{c} -12 \cdot 5 \\ -22 \cdot 0 \\ -18 \cdot 8 \\ -16 \cdot 2 \\ -18 \cdot 5 \\ -4 \cdot 1 \\ -3 \cdot 5 \\ -4 \cdot 1 \\ -3 \cdot 5 \\ -3 \cdot 8 \\ -6 \cdot 6 \\ -2 \cdot 0 \\ -2 \cdot 0 \\ -15 \cdot 0 \\ -22 \cdot 0 \\ -19 \cdot 7 \\ -15 \cdot 9 \\ -21 \cdot 0 \\ -11 \cdot 1 \\ -15 \cdot 9 \\ -11 \cdot 1 \\ -15 \cdot 5 \\ -17 \cdot 5 \\ -17 \cdot 5 \\ -15 \cdot 5 \\ -15 \cdot 5 \\ -15 \cdot 5 \\ -5 \cdot 8 \\ -15 \cdot 5 \\ -5 \cdot 8 \\ -17 \cdot 5 \\ -5 \cdot 8 $	-20·5 -30·3 -29·2 -26·2 -22·4 -15·6 -19·6 -15·6 -19·6 -11·6 -11·6 -11·6 -12·6 -12·6 -12·6 -13·2 -21·2 -31·2 -21·2 -32·2 -32·2 -32·2 -33·2	SW. SW. SW. SW. SW. NW. S. NE. SW. NE. SW. NW. NW. NW. NW. NW. NW. NW.	Miles 7 9 6 10 10 121 16 11 9 9 4 26 19 18 12 6 13 16 15 10 13 11 8 9 15 13 12 1	Miles  2 1 2 6 9 7 5 1 1 0 4 8 10 7 1 1 1 2 0 1 2 0 1 2	29·50 29·58 29·70 29·80 30·02 29·68 29·56 30·04 29·96 30·16 29·96 29·96 29·95 29·97 29·94 29·96 29·95 29·97 29·14 29·18 29·18 29·59 29·19 20·19	29·60 29·65 29·74 29·88 30·00 29·30 29·86 30·04 30·01 30·02 30·16 29·76 29·78 29·91 29·98 29·91 29·98 29·97 29·98 29·97 29·44 29·78 29·97 29·46 20·46 20·46 20·46 20·46 20·46 20·46 20·46 20·46 20·46 20·46 20·46 20·46	32-0	1nches 39 41 43 43	28-0	ness Inches 35	Aurora. Snow—drifting. Aurora-snow-drifting. Aurora. Aurora—snow. Aurora—drifting snow Aurora.

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#### MARCH, 1928

	Air T	Cemp.		Wind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
Date  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 5	2.9 3.0 9.2 19.8 14.9 8.3 6.8 5.3 - 1.5 - 3.1 - 5.8 - 4.5 - 6.0 - 0.7 9.8 11.8 12.0 10.8 - 4.6 - 13.0	- 3·2 - 4·0 - 7·9 9·0 2·1 - 7·0 - 10·2 - 10·8 - 11·5 - 11·0 - 12·2 - 11·0 - 14·7 - 3·0 - 8·8 - 17·6 - 22·1 8·8 - 17·6 - 22·1 - 22·1	SW. S.W. NE. S.W. NW. SW. NW. SW. NE. NE. NE. NE. NE. SW. NE. NE. NE. SW. SW. NE.	Miles  15 4 20 16 19 11 22 18 17 13 6 8 9 7 7 7 12 16 19 23 20 19 8 6 6 11	Miles 3 1 3 2 7 7 8 7 8 7 1 0 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0	29·25 29·54 29·49 29·12 29·62 29·62 29·62 29·62 29·63 30·08 30·08 30·02 30·29 30·28 30·30 30·30 30·30 30·30 30·4 40·40 29·28	29·45 29·60 29·20 29·20 29·20 29·20 29·52 29·78 30·00 30·10 30·02 30·12 30·30 30·12 30·30 30·22 29·72 29·16 29·14 29·28 29·54 29·44		1nches 47 47 47		1 ness 1 nehes 45 47 47	Snow drifting.  Snow drifting.  Aurora brilliant. Foggy a.m. Aurora.  Snow—aurora—drifting. Snow flurries. Snow flurries—aurora. Aurora—fog a.m. Aurora—foggy a.m. Aurora—foggy a.m. Aurora—foggy a.m.
26 27 28 29 30 31	7·0 11·9 13·4 18·0 15·0 11·8	$ \begin{array}{c c} - \cdot 5 \cdot 0 \\ - 5 \cdot 0 \\ - 10 \cdot 0 \\ 0 \\ - 1 \cdot 0 \\ - 13 \cdot 0 \end{array} $	SW. NW. NW. NW. SW.	14 13 16 17 16 24	5 1 4 3 1	29·38 29·62 29·80 29·70 29·64 29·76	29·49 29·72 29·82 29·58 29·60		47			Snow flurries. Snow flurries.

#### APRIL, 1928

_	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 16 17 18 19 20 22 23 24 24 25 5 6 6	6.5 - 2.0 - 5.0 - 8.0 - 4.4 - 5.9 0 - 0.8 7.9 3.1 9.1 3.1 9.1 3.1 9.1 3.1 9.1 3.1 9.1 3.1 9.1 3.1 9.1 3.1 9.0 3.1 9.0 3.1 9.0 3.1 9.0 3.1 9.0 3.1 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	-13·2 -18·6 -20·8 -21·0 -17·0 -12·2 -17·2 -19·2 -17·2 -6·1 -8·1 -8·2 -0·3 0·8 -5·0 14·4 22·0 13·6 17·6	NW. SW. SW. SW. SW. NE. SW. NE. SW. NE. SW. NE. SW. NE. SW. NE. NE. NE. NE. NE. NE. NE. NE. NE. NE	Miles  22 21 11 22 13 14 14 13 15 20 13 18 27 9 12 20 18 11 6 7 13 14 20	Miles 3 6 2 7 2 7 5 1 1 5 4 1 2 2 5 8 2 0 0 1 1 4 5 2 2	29 · 48 29 · 54 29 · 52 29 · 61 29 · 88 29 · 80 29 · 84 29 · 92 29 · 74 29 · 64 29 · 72 29 · 88 30 · 10 29 · 68 29 · 68 30 · 10 29 · 64 29 · 72 29 · 94 30 · 10 30 · 1	29·54 29·50 29·62 29·62 29·62 29·97 29·91 29·99 29·64 29·78 30·00 30·02 29·46 30·05 29·62 29·46 30·05 30·02 30·02 30·03 30 30·03 30 30 30 30 30 30 30 30 30 30 30 30 3		Inches  47	Inches	47 53	Snow drifting. Snow drifting. Snow drifting. Trace snow.  Snow p.m. Snow flurries. Snow drifting. Snow. Snow flurries. Trace snow. Snow flurries. Foggy. Snow—trace.
26 27 28 29 30	27·5 24·4 15·1 20·9 29·8	15·1 1·0 8·0 6·0 20·6	SW. SW. NE. W. NW.	14 11 23 14 13	2 4 6 8 2	29·84 29·56 29·46 29·48 29·52	29·62 29·54 29·58 29·30 29·84		51	• • • • • • • •	51	Snow flurries. Snow flurries—drifting Snow flurries—drifting Snow flurries.

MAY, 1928

	Air T	emp.		Wind		Baron	neter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
	10.0	4.0	ATT	Miles	Miles	20.10	20.20		Inches		Inches	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	19-9 23-23 30-8 35-1 24-2 24-1 31-6 32-6 37-5 32-0 25-2 23-1 16-3 24-9 23-8 27-0 34-8 34-9 27-3 31-0 37-3	4·0 11·8 30·0 21·9 19·5 15·1 18·0 21·7 26·2 19·8 12·1 10·2 11·5 11·5 11·5 11·5 11·5 12·0 21·0 21·0 21·0 21·0 21·0 21·0 21·0	NE. NE. NE. SW. NE. NE. NW. NW. NW. NW. NW. NW. SW. SW. SW.	13 18 10 14 14 19 20 21 15 21 19 18 14 12 8 19 17 23 20 16 13 17	1 11 6 4 7 2 3 5 3 2 10 8 9 2 1 2 4 4 4 8 1 2 6 3 1 1 2 6 3 1 1 2 6 3 1 1 2 6 3 1 1 2 6 3 1 1 2 6 3 1 3 1 2 6 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3	30·10 30·22 30·06 29·68 29·72 29·90 29·83 29·24 29·36 29·64 29·71 29·66 29·69 20·69	30·20 30·18 29·94 29·62 29·82 29·93 29·62 29·28 29·26 29·62 29·66 20·66 20 20 20 20 20 20 20 20 20 20 20 20 20		53		52	Snow. Snow. Snow flurries. Snow. Foggy. Ducks seen. Trace snow. Snow flurries.  Drizzling rain. Rain. Snow flurries. Trace snow—first geese seen. Trace snow.
24 25 26 27 28 29	30·0 35·8 35·9 36·0 35·0 38·8	$ \begin{array}{c} 21 \cdot 0 \\ 28 \cdot 7 \\ 32 \cdot 8 \\ 30 \cdot 0 \\ 27 \cdot 8 \\ 27 \cdot 6 \end{array} $	NE. NE. NE. NE. NE.	19 16 21 18 18 19	6 10 16 12 13 10	30·24 29·95 30·10 30·18 30·10 29·96	30·06 30·01 30·14 30·16 30·06 29·82					Trace snow. Drizzling rain. Foggy p.m. Flocks of geese. Trace—rain.
30 31	35·8 40·8	$\begin{array}{ c c c }\hline 28.7\\ 32.7\end{array}$	NE. NE.	19 21	8 13	29·66 29·87	29·79 29·78					Rain.

#### JUNE, 1928

	Air T	emp.		Wind		Baro	meter	Fresh	Water	Salt 1	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4	37.6 42.4 43.7 38.3	32·4 32·1 33·6 31·8	NE. NE. NW. NW.	21 18 13 9	13 4 1 1	29·72 29·68 29·62 29·69	29·70 29·70 29·68 29·71				54	Drizzling rain a.m. Drizzling rain a.m. Drizzling rain—snow flurries.
5	38.2	31.2	SW.	6	0	29.76	29.34		44			Open water near shore of lake 20 ft. wide.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	41.0 40.2 47.1 42.3 38.8 44.0 40.0 42.0 36.6 35.8 48.3 47.8 41.1 41.1 49.2 44.6 48.2 39.8 48.3	28-2 32-3 33-0 33-0 32-5 32-8 31-4 30-0 28-0 29-2 27-6 31-1 32-1 32-1 32-1 32-1 32-1 32-1 32-1	SW. NE. SW. SW. SW. SW. SW. SW. SW. SW. SW. SW	5 13 16 14 8 7 12 21 9 7 7 7 9 10 14 15 12 12 18 19 7 7 7 7	1 1 6 1 0 1 1 2 3 3 0 0 0 0 2 4 1 4 1 1 0 1	29.92 30.00 29.85 29.62 29.42 29.42 29.40 29.40 30.06 30.30 30.40 30.30 30.02 29.95 30.05 29.98 29.88	29.98 39.96 29.75 29.54 29.44 29.46 29.53 29.18 29.39 29.84 30.08 30.34 30.38 30.10 29.96 29.96 29.86 29.86		24		37	Drizzling rain. Showers. Many small lakes, now little or no ice. Showers. Fog a.m. Rain a.mp.m.
27 28 29 30	58·2 58·2 55·8 44·8	34·5 43·6 38·9 38·3	NE. NE. NE. NE.	9 15 21 17	0 0 15 12	29·79 29·65 29·54 29·73	29·61 29·52 29·61 29·74					Hazy on horizon over water.

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#### JULY, 1928

Date	Air 7	emp.		Wind		Baro	meter	Fresh	Water	Salt	Water	Remarks
	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3	$52.9 \\ 50.8 \\ 54.1$	38·9 41·0 36·6	NE. NE. NE.	18 18 19	11 9 1	29·74 29·72 29·60	29·70 29·67 29·65					Slight rain p.m.
4 5	$52 \cdot 9 \\ 49 \cdot 9$	33·9 34·8	SW. SW.	9	1 3	29·73 29·84	29·85 29·83					Light rain early a.m.
6 7 8	46·6 61·0 57·0	36·3 36·1 36·1	SW. NW. SW.	8 13 13	2 1 1	29·75 29·55	29·64 29·66					
9 10	49·2 53·6	35·6 36·9	SW. SW.	8	1	29·73 29·80 29·88	29 · 69 29 · 82 29 · 86		• • • • • • • •			Rain a.m.
11 12 13	$63 \cdot 2$ $56 \cdot 1$ $45 \cdot 9$	36·0 38·2 37·8	SW. SW. SW.	13 10 14	3 2 5	29·79 29·92 29·85	29·84 29·94			33		
14 15	47·9 48·2	37·5 37·0	SW. SW.	13 14	6 4	29·85 29·72 29·72	$   \begin{array}{c c}     29 \cdot 84 \\     29 \cdot 68 \\     29 \cdot 76   \end{array} $					Fog p.m. Fog.
16 17 18	52·2 53·8 55·1	$40 \cdot 1$ $41 \cdot 0$ $42 \cdot 2$	NE. NE. SW.	8 16 11	1 1 4	29.54 $29.38$ $29.51$	29·46 29·44			36		Rain—low clouds.
19 20	51·0 48·1	39·5 35·5	W. SW.	11 35	2 3	29·51 29·63 29·37	29·53 29·69 29·52	• • • • • • • •	• • • • • • • •	• • • • • • • •		Trace—rain. Trace—rain. Rain a.m.
21 22 23	43·8 44·5 42·8	34·0 35·1 36·4	SW. SW. SE.	12 11 18	3 6	29·76 29·73	$29.77 \\ 29.78$					Fog a.m. Rain p.m.
24 25	$\frac{40 \cdot 2}{38 \cdot 1}$	33·7 32·9	SW. SW.	18 19	9 7	29.59 $29.25$ $29.37$	$29 \cdot 27$ $29 \cdot 28$ $29 \cdot 17$					Rain—fog in p.m. Rain a.m., fog. Rain.
26 27 28	43·7 44·0 42·5	$   \begin{array}{c c}     34 \cdot 9 \\     34 \cdot 0 \\     35 \cdot 2   \end{array} $	S. E.	14 12	7 3	29·80 30·01	$   \begin{array}{c c}     29 \cdot 94 \\     30 \cdot 05   \end{array} $					Showers, fog. Fog—rain.
29	50.9	32.1	NE. SW.	11 7	0	30.08	30.06		• • • • • • • • •			Fog to SW. early. Thick fog in p.m.
30 31	50·9 56·9	38·0 38·0	NE. NE.	11 15	0	29·92 29·92	30.00			35		Fog several hours in

#### AUGUST, 1928

Date	Air Tem	perature.		Wind		Mean	G-14
	Max.	Min.	Direction	Max.	Min.	ter ter	Salt-water Temp.
1	<b>50.0</b>	45.0	NE	Miles	Miles		
2	$53 \cdot 0 \\ 57 \cdot 0$	45.0	NE.	16	2	29.70	
3	58.0	41·0 44·0	NE.	12	7	29.08	
4	99.0	44.0	NE. NE-SW.	12	6	30.00	
5	57.0	47.0	SW-NE.	8 12	3	30.07	
6	47.0	30.0	NE-SW.	14	2	30.05 $29.95$	
7	47.0	42.0	NE.	15	$\frac{2}{2}$	29.95	
8	49.0	40.0	SW-NW.	15	$\frac{2}{2}$	29.62	
9	50.0	39.0	SW-SE.	15	4	29.55	
0	$47 \cdot 0$	39.0	SW.	16	4	29.40	
1	$43 \cdot 0$	38.0	SW.	16	8	29.50	
2	$48 \cdot 0$	37.0	SW.	14	3	29.60	
3	$45 \cdot 0$	34.0	S-NW.	25	6	29.50	
4	48.0	40.0	NE-S.	25	8	29.50	
5	48.0	39.0	SW.	16	4	29.89	
6	48.0	39.0	SW-NW.	8	2	29.90	
7	$\frac{46 \cdot 0}{52 \cdot 0}$	38.0	SW.	10	4	29.88	
9	57.0	35.0	NW-W.	22	4	29.83	
0	51.0	$\frac{40 \cdot 0}{39 \cdot 0}$	NE-SW. NW-SW.	4	0	29.80	
1	51.0	38.0	SE-NE.	28	16	29.55	
2	45.0	38.0	NW.	20	8	29.60	
(missing) (missing)	10.0	30.0	IN VV.	20	8	29.60	
6 (missing)	52.0	32.0	SW-S.	32	6	29.44	
7	$41 \cdot 0$	38.0	SE.	13	8	29.74	
3	45.0	37.0	SE-NE.	12	2	29.74	
9	48.0	38.0	NW-NE.	16	5	29.55	
2	47.0	33.0	NW.	7	4	29.66	
	43.0	33.0	NW-SW.	6	2	29.68	

# METEOROLOGICAL OBSERVATIONS—BASE "B"—Continued SEPTEMBER, 1928

Date	Air Tem	perature	,	Wind		Mean Barome-	Salt-water
Date	Max.	Min.	Direction	Max.	Min.	ter	Temp.
				Miles	Miles		
1	41·0 41·0 40·0 40·0 46·0 35·0 32·0 38·0 36·0 37·0 39·0 44·0 39·0 44·0 39·0 43·0 38·0 43·0 38·0 38·0 43·0 39·0 43·0 38·0 43·0 43·0 43·0 43·0 43·0 43·0 43·0 43	28·0 31·0 33·0 36·0 37·0 30·0 29·0 32·0 29·0 31·0 32·0 35·0 33·0 45·0 35·0 35·0 34·0 34·0 34·0	NW. SW-NW. SW-SE. NE-NW. NW. NW. NW. NW-SE. SW-SE. SW-N. SW-SE. SW-N. SW-SE. SW-N. NE. NW. NW. NW. NW. NW. NW. NW. NW. NW. NW	7 9 17 222 14 46 20 18 22 23 14 25 16 15 19 13 34 8 8 23 10 17 19 22	Miles  3 5 5 4 8 8 12 14 13 12 8 8 18 18 9 15 5 9 2 2 13 9 7 0 0 4 2 0 0 10 7 7	29·66 29·75 29·75 29·75 29·54 29·54 29·54 29·62 29·49 29·45 29·63 29·55 29·73 29·87 29·47 29·49 29·47 29·47 29·49 29·47 29·49 29·33 29·47 29·33 29·47 29·44 29·34	
28 (missing) 29	$\begin{array}{c} 34 \cdot 0 \\ 35 \cdot 0 \end{array}$	$\begin{array}{c} 30 \cdot 0 \\ 31 \cdot 0 \end{array}$	NW. SW-NW.	18 8	5 6	29·64 29·74	

#### OCTOBER, 1928

Date	Air Tem	perature		Wind		Mean Barome-	Salt-water
Date	Max.	Min.	Direction	Max.	Min.	ter	Temp.
				Miles	Miles		
1	34·0 38·0 37·0 38·0 41·0 37·0 36·0 35·0 35·0 29·0 31·5 	$31 \cdot 0$ $29 \cdot 0$ $30 \cdot 0$ $31 \cdot 0$ $33 \cdot 0$ $35 \cdot 0$ $32 \cdot 0$ $31 \cdot 0$ $32 \cdot 0$ $24 \cdot 0$ $2$	NE. NE. NE. SE. SE-NW. NE. SE-SW. SW-SE. SE-E. S-NE. SW-NW. NE. NW. NE. NW. NW-NW. NW-NE. NW. NW-NW.	10 22 21 18 23 14 25 24 9 11 18 15 10 18 21 16 19 26 7 7 7 9 5 12 25 12 23 14 25 25 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	0 10 12 10 2 6 11 13 15 4 6 13 3 7 7 3 9 9 4 4 3 0 0 3 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	29·78 29·65 29·78 29·92 29·27 28·95 29·28 29·28 29·61 29·90 29·87 29·65 29·24 29·65 29·66 29·65 20·65	
			Į.			1	

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#### NOVEMBER, 1928

Date	Air Tem	perature		Wind		Mean Barome-	Salt-water
Date	Max.	Min.	Direction	Max.	Min.	ter	Temp.
1	Max.  26.9 26.5 25.1 24.0 28.1 29.0 31.0 25.17 29.8 29.2 29.5 25.7 25.8 25.5 26.0 19.1 13.3 18.5 19.0 25.5 15.2 26.0	Min.  20·9 19·1 12·5 12·0 23·5 26·6 22·8 23·1 17·6 17·0 27·0 16·1 9·8 10·2 13·6 6·0 8·5 5·0 11·4 10·7 9·0 16·5 5·0	SE-NE. NE. NE. NE. NE. NE. NE. NE. NE. NE.	Max.  Miles 22 7 8 21 21 21 25 10 16 18 15 17 12 6 6 8 32 17 9 17 23 20 21 13 19 16	Min.  Miles 5 4 4 7 18 10 4 13 5 6 13 2 1 2 3 16 10 3 6 7 10 8 7 5 8	29.18 29.55 29.68 29.56 29.51 29.76 29.87 29.92 29.84 29.73 29.67 29.91 30.05 29.60 29.76 29.58 29.37 29.31 29.63 29.64 29.63	29·5 29·9 30·2 30·2 29·8 30·2 29·8 29·8 29·7 29·3 29·3 29·3 29·3 29·3 29·3 29·3
26	$   \begin{array}{c}     10 \cdot 7 \\     13 \cdot 9 \\     8 \cdot 0 \\     8 \cdot 0 \\     12 \cdot 5   \end{array} $	$ \begin{array}{c c} 4.5 \\ 3.0 \\ 1.9 \\ 4.0 \\ 5.5 \end{array} $	N-SW. SE-W. W-NW. NW.	10 20 25 22 15	6 4 5 9	$ \begin{array}{c cccc}  & 29.71 \\  & 29.15 \\  & 29.57 \\  & 29.37 \\  & 29.71 \end{array} $	

#### DECEMBER, 1928

$ \begin{array}{ c c c c c c c c } \hline Date & Air Temperature. & Wind & Min. & Miles & Mi$			DECEMB	ER, 1928				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Date	Air Tem	perature.		Wind			Salt-water
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Max.	Min.	Direction	Max.	Min.		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 3 4 4 5 6 7 7 8 9 10 10 11 12 13 14 15 16 17 18 19 20 21 12 12 12 12 12 12 12 12 12 12 12 12	10·1 8·0 2·5 3·0 9·7 6·0 13·1 23·0 15·2 13·4 25·9 25·4 15·9 12·0 17·2 18·0 20·0 22·5 6·9 11·0 8·5 -3·6 11·1 1	$\begin{array}{c} 2 \cdot 9 \\ -7 \cdot 9 \\ -9 \cdot 0 \\ -4 \cdot 0 \\ -4 \cdot 0 \\ -13 \cdot 0 \\ -2 \cdot 5 \\ -12 \cdot 5 \\ -2 \cdot 5 \\ -12 \cdot 6 \\ 12 \cdot 6 \\ 19 \cdot 5 \\ 2 \cdot 2 \\ 1 \cdot 0 \\ 10 \cdot 0 \\ 13 \cdot 9 \\ 12 \cdot 9 \\ 9 \cdot 8 \\ 3 \cdot 0 \\ -14 \cdot 1 \\ -13 \cdot 0 \\ -18 \cdot 5 \\ -19 \cdot 2 \\ -10 \cdot 1 \\ -11 \cdot 5 \\ -2 \cdot 3 \\ -10 \cdot 1 \\ -11 \cdot 5 \\ -2 \cdot 8 \\ \end{array}$	SW-NE. NW. SW. NW-NE. N-NW. SW-SE. SE-W. NW. NE-SE. SE-S. SW-NW. NW-NE. NW-NE. NW-NE. NW. N-NW. N-NW. NW. NW. NW. NW. NW. NW. NW. NW. NW.	12 12 12 20 9 21 28 40 28 19 13 26 22 23 8 10 24 22 20 20 20 20 20 21 14 20 20 17 17 19 10 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	5 1 2 10 0 3 3 21 36 6 2 2 11 16 4 4 4 6 6 16 15 1 9 13 6 10 11 9 7 7 2 8 8 5 5	29.88 29.81 30.10 30.01 29.77 29.64 29.37 29.22 29.80 29.97 29.53 29.42 29.74 29.72 29.70 28.97 29.30 28.97 29.34 29.44 29.39 29.44 29.48 29.49 29.49 29.80 29.87 29.81 29.76	

# Meteorological Observations—Base " $\mathrm{C}$ "

#### AUGUST, 1927

	Air T	emp.		Wind		Baro	meter	Fresh	water	Salt	water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
24 25 26 27 28 29 30 31			NW. NW. E-SW. W-N. W-E. W. NW.	15 7 35 35 12 15 18 8	3 0 10 8 2 5 5					36·0 36·0 35·0 36·0 36·0 36·0 36·0		Rain showers. Smoky. Rain. Snow flurries.

#### SEPTEMBER, 1927

	Air T	emp.	7	Wind		Baron	neter	Fresh	water	Salt	water	_
Date	Max.	Min.	Dir.	Max.	Mın.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Mıles				Inches		Inches	
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 6 27 28 29 30		37·0 32·5 35·0 36·5 33·5 33·0 32·0 30·2	E. E. SW. SW. SW. NW. NW. NE. N. NE. NE. NE. NE. NE. SW. W. W. W. W. W. W. W. W. W.	5 5 5 5 28 12 7 7 20 20 1 12 5 18 25 8 10 6 5 5 8 8 10 6 6 15 5 5 8 8 10 6 6 15 24 18 12 10	2 0 10 2 0 8 10 0 5 3 3 12 2 0 0 5 2 0 0 0 5 2 0 0 0 0 0 0 0 0 0	29·53 29·53 29·51 29·65 29·71 29·51 29·51 29·87 30·01	29-70 29-58 29-58 29-58 29-82 29-32 30-00 29-96			35·0 35·0 36·0 35·0 35·0 35·0 35·0 35·0 35·0 35·0 35		Rain—evening. Rain—evening. Rain—evening. Heavy rain. Scattered showers Rain. Rain. Rain. Rain. Rain. Rain. Rain. Heavy rain. Rain. Heavy rain. Heavy rain. Showers. Heavy rain. Showers. Heavy rain. Showers. Showers.

#### OCTOBER, 1927

	Air T	emp.		Wind		Baro	meter	Fresh	water	Salt	water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	38.0 34.5 31.0 30.0 33.5 31.0 35.0 33.2 33.0 47.6 31.5 34.5 35.0 35.0	28·0 27·8 26·5 25·2 27·0 27·5 23·5 21·0 23·5 29·0 23·0 30·2 26·2 30·0 29·5 24·0	SW. W. SW. SW. SW. NW. NW. NW. SW. NW. SW. SW. NW. SW. SW. SW.	30 25 20 15 20 8 10 8 20 25 2 5 18 11	5 0 10 5 15 5 0 2 6 10 0 6 0 5 2	29.86 30.22 30.15 29.59 29.70 30.00 30.04 30.05 30.05 30.05 30.05 30.06 30.05 30.06 30.06 30.06	29·93 30·28 29·85 29·53 30·01 30·04 30·05 30·02 30·03 29·54 29·32 30·00 30·30			35·0 34·0 33·0 32·0 33·0 34·0 33·0 33·0 33·0 35·0 34·0 35·0 35·0 34·0		Snow. Snowflurries. Snow—evening. Snow—evening. Snow—evening. Snowflurries.
17 18 19 20 21 22 23	35·0 39·5 36·0 34·0 36·0 35·0	26·0 31·0 31·0 32·0 32·0 31·0	SW. SW-E. E. SW. SW. SW.	10 8 10 5 15 10	2 3 0 0 3 2 0	30·33 29·95 29·89 29·66 29·76 29·84 29·77	30·54 29·93 29·79 29·72 29·79 29·84 29·71			33·0 33·0 34·0 34·0 34·0 33·0 34·0		Lake partly frozen over. Lake open.  Lake partly frozen. Rain—lake open. Showers. Fog. Lake partly frozen
24 25 26 27 28 29 30 31	34·0 33·0 30·0 29·0 29·0 30·0 29·5 30·0	$30 \cdot 0$ $28 \cdot 0$ $27 \cdot 0$ $21 \cdot 0$ $21 \cdot 0$ $26 \cdot 0$ $18 \cdot 5$ $12 \cdot 0$	W. SW. SW-N. SW. SW. SW-W. SW. E-W.	15 5 12 8 5 20 20 32	5 0 2 2 0 3 5	29·76 29·81 29·68 29·73 29·82 29·96 30·02 29·78	29 · 82 29 · 74 29 · 70 29 · 69 29 · 54 30 · 02 30 · 01 29 · 44			33·0 33·0 32·0 32·0 31·0 31·0 29·0		over. Lake frozen over. Snowflurries. Snowflurries. Snowflurries. Fog over straits. Snow.

#### NOVEMBER-1927

D.	Air T	emp.		Wind		Baro	meter	Fresh	water	Sal	t water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4	33·0 34·0 36·0 33·0	$26 \cdot 0$ $21 \cdot 0$ $27 \cdot 0$ $20 \cdot 5$	NE. E. S-SW. SW-E.	Miles 25 32 38 38	Miles 2 10 10	29·37 29·30 28·89 29·92	29·34 28·49 29·48 29·72	$32 \cdot 2$ $32 \cdot 0$ $32 \cdot 0$ $32 \cdot 0$	Inches	29·0 29·0 29·0 30·0	Inches	Drfiting. Snowflurries.
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	$\begin{array}{c} 43 \cdot 0 \\ 45 \cdot 0 \\ 36 \cdot 0 \\ 36 \cdot 0 \\ 31 \cdot 0 \\ 26 \cdot 0 \\ 22 \cdot 0 \\ 22 \cdot 0 \\ 22 \cdot 0 \\ 24 \cdot 0 \\ 20 \cdot 0 \\ 21 \cdot 5 \\ 21 \cdot 0 \\ 26 \cdot 0 \\ 21 \cdot 0 \\ 26 \cdot 0 \\ 27 \cdot 0 \\ 20 \cdot 0 \\ 11 \cdot 0 \\ 20 \cdot 0 \\ 11 \cdot 5 \\ 18 \cdot 0 \end{array}$	$\begin{array}{c} 31 \cdot 0 \\ 29 \cdot 0 \\ 29 \cdot 0 \\ 31 \cdot 0 \\ 22 \cdot 0 \\ 22 \cdot 0 \\ 23 \cdot 0 \\ 20 \cdot 0 \\ 16 \cdot 0 \\ 21 \cdot 0 \\ 15 \cdot 0 \\ 12 \cdot 2 \\ 13 \cdot 0 \\ 6 \cdot 0 \\ 13 \cdot 0 \\ 17 \cdot 0 \\ 16 \cdot 0 \\ 17 \cdot 0 \\ 1 \cdot 0 \\ 3 \cdot 0 \\ -1 \cdot 0 \end{array}$	E. NE-E. NE-E. NE-E. SW. SW. SW. SW. SW. SW. SW. SW. SW. SW	25 28 18 20 28 26 24 34 34 27 29 26 26 23 13 24 24 21 15 21 20	2 10 3 5 16 14 11 1 12 17 20 62 12 4 1 1 1 1 4 4 1 1 1 1 1 1 1 1 1 1 1	29·32 29·964 29·21 29·37 29·98 29·58 29·58 29·58 29·58 30·17 29·93 30·17 29·60 29·60 29·60 29·61 29·87	29·35 30·03 29·35 29·24 29·58 29·91 29·11 29·11 30·18 30·18 29·66 29·45 29·76 29·76 29·76 29·68	35·0 33·0 32·5 32·5 31·0 30·0 31·0 31·0 31·0 31·0 31·0 31·0	13	33·0 32·0 32·0 32·0 30·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0 2	3 6	Rain. Rain. Snow flurries. Snow—drifting. Snow—drufting. Light snow. Heavy snowfall. Bay partly frozen over Bay almost frozen over Bay completely frozen
26 27 28 29 30	$14 \cdot 0$ $21 \cdot 0$ $20 \cdot 0$ $10 \cdot 0$ $13 \cdot 5$	$ \begin{array}{c} 1 \cdot 0 \\ 2 \cdot 0 \\ 5 \cdot 0 \\ 0 \\ 3 \cdot 0 \end{array} $	E. SW-W. NW-SW SE-E. NE- NW.	11 25 27 11 9	1 4 4 5 9	29·53 29·18 29·50 29·76 29·63	29·39 29·23 29·68 29·70 29·40	30·0 30·0 30·0 30·0	22	28·5 29·0 29·0 29·0 29·0	$7 \\ 7^{\frac{1}{2}} \\ 8 \\ 8^{\frac{1}{2}} \\ 9$	over. Heavy snow. Snow—evening.

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#### DECEMBER, 1927

	Air T	`emp.	V	Vind		Baron	meter	Fresh	water	Salt ·	water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 4 5 6 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 6 27 7 28 8 29 30 31	18·0 18·0 18·0 18·0 18·0 10 10 10 10 10 10 10 10 10 10 10 10 10	13·0 -6·0 -27·0 4·0 6·0 6·0 -12·0 -15·0 -12·0 -15·0 -12·0 -15·0 -15·0 -17·0 -11·0 -17·0 -19·0 -18·0 -19·0 -19·0 -10	SW. SW-W. SW-SE. SE-SW. SW-E. SE-E. SE-N. N-SW. SE-N. N-SE. SE-N. N-SE. N-SE-N. NW-SE. E-NW. SE-NW. NW-SW. NW-SW. NW-SW. NW-SW. NW-SW. NW-SW. NW-SW. NW-SW. NW-SW. N-NW-SW. N-	Miles  36 41 25 27 13 32 31 32 31 36 48 30 10 10 16 15 5 8 19 7 11 9 10 18 22 9 17 19 26 12 28	Miles  1 24 18 6 0 2 5 12 11 7 5 2 12 11 1 7 5 2 1 1 1 1 0 0 0 1 1 1 1 0 0 1 1 1 1 1 0 0 1 1 1 1 1 1 0 0 1	29·02 29·08 29·50 29·86 29·41 29·41 29·41 29·42 30·14 28·76 29·49 29·75 30·04 29·99 430·15 30·20 30·12 30·20 30·12 30·30 29·49 30·15 30·20 30·20 30·20 30·20 30·20 30·30 30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30·30 30 30 30 30 30 30 30 30 30 30 30 30 3	28 · 85 · 29 · 41 · 29 · 64 · 29 · 57 · 29 · 18 · 29 · 65 · 29 · 05 · 29 · 06 · 29 · 81 · 30 · 00 · 29 · 81 · 30 · 12 · 30 · 17 · 30 · 18 · 30 · 17 · 30 · 18 · 30 · 17 · 30 · 18 · 30 · 1	30·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0	1 ness	29·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0	Inches  11 12 12·5 13 13 13 14 14 14 15·5	Snowing. Snowing. Snow flurries. Snow flurries. Heavy snow. Drifting. Stormy. Stormy. Snowflurries. Snowflurries. Snowflurries. Snowflurries. Snowflurries. Snowflurries. Snowdurries. Snowdurries. Snowdurries. Snowdurries.

### JANUARY, 1928

	Air T	Temp.	V	Vind		Baro	meter	Fresh	water	Salt	water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 3 4 5 6 6 7 8 8 9 10 11 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	- 3·2 - 2·0 - 8·0 - 22·0 - 22·0 - 22·0 - 7·0 - 7·0 - 16·0 - 14·0 - 12·0 - 15·2 - 10·5 - 17·5 - 17·5 - 17·5 - 17·5 - 17·5 - 17·0 - 8·5 - 17·5 - 17·5 - 17·0 - 6·0 - 17·2 - 6·0 - 17·2 - 6·0 - 17·2 - 6·0 - 17·2 - 6·0 - 17·2 - 6·0 - 17·2 - 6·0 - 17·3 - 17·5 - 18·5 - 1	-12·0 -14·0 -25·0 -26·0 -27·0 -28·0 -25·5 -19·0 -25·5 -19·0 -23·2 -26·5 -17·0 -17·2 -23·0 -23·0 -21·2 -18·5 -17·0 -15·0 -20·0 -21·0 -20·0 -21·0 -20·0 -15·1 -16·4 -19·2 -13·2 -13·2	SW-NW. NW-SW. SW-SE, S-W. W-SW. NW-SW. NE-NW. NE-NW. NE-SW. SE-SW. NW-SW. N-SW. N-SW. W-SW. NW-SW.	Miles 20 28 28 20 14 15 22 25 8 6 6 6 16 27 31 37 30 26 13 24 14 40 30 30 30 40 28 24 15 16 18	Miles  2 6 5 4 10 0 5 7 1 0 0 3 3 10 14 12 2 2 2 2 3 1 19 21 24 25 3 10 34 4 3 3	29 · 80 29 · 04 29 · 24 29 · 42 29 · 41 29 · 62 29 · 92 29 · 92 29 · 93 29 · 99 29 · 32 29 · 99 29 · 10 29 · 32 29 · 99 29 · 13 29 · 91 29 · 92 32 · 94 29 · 59 29 · 49 29 · 59 28 · 79 28 · 89 29 · 99 29 · 90 29 · 90 20	29 · 47 28 · 93 29 · 38 29 · 38 29 · 50 29 · 72 29 · 65 29 · 34 29 · 34 29 · 34 29 · 34 29 · 34 29 · 36 29 · 36 29 · 37 29 · 65 29 · 72 29 · 66 29 · 74 29 · 66 29 · 74 29 · 66 29 · 74 29 · 64 29 · 74 29 · 74 20 · 75 20	30-0 30-0 30-0 30-0 30-0 30-0 30-0 30-0	43 445 47 49	29·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0	25 26 29 32 35 35	Snowflurries. Snow—drifting. Drifting. Snow. Drifting. Snow—drifting Drifting—snow Drifting—snow Drifting—snow Drifting—snow Drifting—snow Drifting—snow Drifting—snow

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#### FEBRUARY, 1928

	Air 7	emp.	V	Vind		Baro	meter	Fresh	water	Salt	water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	-12·5 -15·2 -14·5 -17·2 -14·5 -5·0 -4·0 -4·5 -8·8 -18·0 -16·8 -18·0 -16·5 -18·5 -18·5 -18·5 -18·5 -18·6 -18·	$\begin{array}{c} -19\cdot2 \\ -25\cdot0 \\ -22\cdot8 \\ -24\cdot2 \\ -24\cdot2 \\ -24\cdot2 \\ -16\cdot0 \\ -20\cdot5 \\ -20\cdot0 \\ -20\cdot5 \\ -20\cdot0 \\ -20\cdot5 \\ -22\cdot5 \\ -29\cdot0 \\ -27\cdot0 \\ -22\cdot5 \\ -29\cdot0 \\ -27\cdot0 \\ -29\cdot0 \\ -27\cdot0 \\ -27\cdot0 \\ -29\cdot0 \\ -27\cdot2 \\ -29\cdot0 \\$	NW-N. E-N. NE-W. NW-W. NW-W. NW-SE. N-PW. NW-E-NW. NW-SW.	18 6 13 19 24 21 6 9 13 28 23 22 6 6 9 7 7 17 13 19 24 23 24 24 21 21 21 21 21 21 21 21 21 21 21 21 21	2 0 1 1 2 3 14 3 1 0 2 2 4 4 17 0 0 0 0 1 1 1 2 2 2 2 1 1 1 1 1 2 1 2 1	29·51 29·62 29·67 29·80 30·00 29·84 29·25 29·88 30·01 30·01 30·01 30·01 30·01 30·01 30·01 30·01 29·53 29·53 29·53 29·82 29·98 20·98 20	29·57 29·64 29·72 29·88 30·00 29·41 29·66 30·04 30·06 29·99 30·19 29·97 29·97 29·97 29·97 29·97 29·97 29·97 29·37 29·37 29·37 29·37 29·44 29·20 29·38	30·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0	51 53 55 55 57	29·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0	40 42 44	Snow. Drifting. Drifting in morning. Snow—drifting. Drifting. Drifting.  Drifting at night. Snow during night. Drifting. Drifting. Drifting. Snowflurries.

#### MARCH, 1928

	Air 7	Γemp.	V	Vind		Baro	meter	Fresh	water	Salt	water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 4 5 6 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	5.5 7.0 22.5 23.1 15.0 18.8 17.0 5.0 0 0 -8.0 4.8 4.0 13.0 9.8 20.8 14.4 0 -2.8 -7.5 0 3.5 16.8 18.0 18.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	$\begin{array}{c} -5 \cdot 2 \\ -4 \cdot 0 \\ 5 \cdot 8 \\ 9 \cdot 5 \\ -3 \cdot 8 \\ 11 \cdot 2 \\ -7 \cdot 8 \\ -12 \cdot 0 \\ -16 \cdot 0 \\ -8 \cdot 5 \\ -15 \cdot 8 \\ -14 \cdot 0 \\ -8 \cdot 5 \\ -15 \cdot 8 \\ -6 \cdot 8 \cdot 5 \\ -16 \cdot 0 \\ -3 \cdot 8 \cdot 6 \\ -16 \cdot 5 \\ -17 \cdot 2 \\ -16 \cdot 0 \\ -3 \cdot 8 \\ -16 \cdot 2 \\ -17 \cdot 2 \\ -23 \cdot 4 \\ -7 \cdot 0 \\ 17 \cdot 8 \\ 17 \cdot 2 \\ 13 \cdot 5 \\ 1 \cdot 0 \\ \end{array}$	NE-NW. N'-NW. N'-NW. NW-NE. SW-NE. NW-NE. NW. N'-SW. N'-SW. N'-SW. N'-SW. N'-SW. N'-SE. E-NW. N'-SE. E-NW. NW-E. N'-SE. E-SW. SE-W. W'-SW. NW-SW. NW-SW. NW-SW. NW-SW. NW-SW. N'-NW.	Miles 5 40 36 144 13 32 18 14 15 7 17 14 18 6 6 18 12 10 11 18 10 13 31 18 10 13 31 31 31 31 31 31 31 31 31 31 31 31	Miles 0 4 6 9 1 1 2 0 8 1 1 1 2 5 6 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	29 · 30 29 · 53 29 · 05 29 · 05 29 · 05 29 · 52 29 · 92 29 · 52 29 · 92 30 · 11 30 · 06 29 · 95 30 · 29 30 · 35 30 · 29 30 · 18 30 · 08 30 · 08 30 · 08 30 · 08 30 · 08 30 · 99 30 · 18 30 · 99 30 · 18 30 · 99 30 · 18 30 · 99 30 · 18 30 · 99 30 · 99 30 · 99 30 · 99 30 · 99 30 · 18 30 · 99 30	29 · 48 29 · 48 28 · 85 28 · 85 29 · 44 29 · 45 30 · 05 30 · 05 30 · 12 30 · 30 30 · 12 30 · 30 30 · 12 30 · 30 30 · 12 30 · 30 30 · 25 30 · 12 30 · 30 30 · 40 29 · 68 29 · 53 29 · 53 29 · 56 29 · 66 29 · 66 29 · 66	30·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0	58 59 60 60 60 60 60 60 60	29·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0	44 45 48 48 48 48 48	Snow. Drifting snow. Drifting snow. Snow. Snow during night. Snow—drifting. Drifting. Drifting. Drifting.  Dense fog in a'm. Drifting. Snow and drifting in p.m. Snow. Snow—drifting all day. Urifting. Drifting. Drifting.

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# APRIL, 1928

	Air T	emp.	V	Vind		Baro	neter	Fresh	Water	Salt '	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches	Inches		
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	$\begin{array}{c} 15 \cdot 5 \\ 13 \cdot 0 \\ 2 \cdot 0 \\ 2 \cdot 0 \\ -4 \cdot 0 \\ 6 \cdot 0 \\ 6 \cdot 2 \\ 13 \cdot 5 \\ 14 \cdot 0 \\ 8 \cdot 0 \\ 14 \cdot 0 \\ 13 \cdot 0 \\ 14 \cdot 0 \\ 13 \cdot 0 \\ 24 \cdot 0 \\ 27 \cdot 5 \\ 28 \cdot 0 \\ 24 \cdot 0 \\ 27 \cdot 5 \\ 28 \cdot 0 \\ 24 \cdot 2 \\ 31 \cdot 0 \\ 24 \cdot 2 \\ 31 \cdot 0 \\ 26 \cdot 0 \\ 27 \cdot 5 \\ 28 \cdot 0 \\ 27 \cdot 5 \\ 27 \cdot 5 \\ 28 \cdot 0 \\ 27 \cdot 5 \\ 2$	$\begin{array}{c} -1\cdot 0 \\ -2\cdot 0 \\ -2\cdot 0 \\ -2\cdot 5 \\ -15\cdot 0 \\ -17\cdot 5 \\ -18\cdot 2 \\ -6\cdot 8 \\ 12\cdot 2 \\ -6\cdot 5 \\ -2\cdot 5 \\ -2\cdot 6 \\ 0 \\ -6\cdot 5 \\ -2\cdot 6 \\ 0 \\ 0 \\ 0 \\ 12\cdot 0 \\ 17\cdot 3 \\ 14\cdot 0 \\ 25\cdot 0 \\ 12\cdot 6 \\ 18\cdot 2 \\ 17\cdot 5 \\ 12\cdot 6 \\ 3\cdot 2 \\ -1\cdot 0 \\ 20\cdot 0 \\ \end{array}$	NW-SW. NW-SW-NW-SW-NW-SW-NW-SE-NW-NW-SE-SW-N. NE-W-N. NW-SE-NW-NN-SW-NW-SE-NW-NN-SW-NW-SE-SW-N. N. SW-NW-SW-SW-NW-SW-SW-NW-SW-SW-NW-SW-SW-SW-SW-SW-SW-SW-SW-SW-SW-SW-SW-SW	17 15 26 19 12 17 15 12 8 14 12 20 36 36 36 32 48 48 48 20 29 22 16 30 22 22 22 22 22 22 22 22 22 22 22 22 22	2 1 3 3 1 5 6 6 0 0 0 1 0 0 0 9 2 2 3 2 6 6 1 6 1 1 4 1 4 1 1 1 1 1 1 1 1 1 1 1	29 · 50 29 · 59 29 · 44 29 · 78 29 · 92 29 · 92 29 · 92 29 · 80 29 · 81 30 · 002 29 · 47 29 · 80 29 · 14 29 · 47 29 · 59 29 · 99 30 · 02 29 · 99 30 · 02 29 · 99 30 · 02 29 · 59 29 · 54	29 · 51 29 · 62 29 · 50 29 · 72 29 · 73 29 · 97 29 · 97 29 · 70 29 · 86 30 · 07 29 · 81 29 · 40 30 · 10 20 · 79 29 · 54 29 · 54 29 · 54 29 · 63 29 · 75 29 · 86 30 · 01 29 · 86 30 · 01 29 · 86 29 · 64 29 · 64 29 · 64 29 · 64 29 · 64 29 · 64	30·0 30·0 31·0 31·0 31·0 31·0 31·0 31·0	60 60 60 60 60 60 60 60 60 60 60 60 60 6	29·0 29·0 29·0 29·0 29·0 29·0 29·0 29·0	48 48 48 48 48 48 48 48 48 48	Drifting.  Snow.  Snow at night. Snow—drifting. Snow—drifting. Drifting in a.m. Snow—drifting. Drifting in a.m. Snow—drifting. Snow—drifting. Snow—drifting. Snow—drifting. Snow—drifting. Snow—drifting. Snow—drifting. Snow—drifting. Snow during night.  Snow in afternoon.

#### MAY, 1928

	Air T	emp.	W	ind		Baron	meter	Fresh	water	Salt	water	-
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4 4 5 5 7 8 9 10 112 13 14 15 16 17 18 19 20 21 22 22 23 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	34·0 34·0 32·0 39·0 42·8 33·0 42·8 41·0 41·0 35·0 41·0 35·0 36·0 36·0 36·0 36·0 36·0 36·0 36·0 36	24·0 21·2 22·3 27·0 32·0 24·8 20·5 12·5 22·0 30·0 11·5 11·0 11·3 21·5 22·5 12·5 22·0 30·0 11·5 11·0 11·3 11·5 11·5 12·5 22·5 23·0 30·0 30·0 11·5 11·0 30·0 21·5 22·5 10·0 30·0 21·5 22·5 22·5 10·0 30·0 21·5 22·5 22·5 30·0 30·0 21·5 22·5 22·5 30·0 30·0 21·5 22·5 30·0 30·0 30·0 21·5 22·5 30·0 30·0 30·0 21·5 22·5 30·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0 20·0 30·0 30·0 30·0 20·0 30·0 30·0 20·0 30·0 20·0 30·0	NW-N. SE. SE. SE. W. NW-E. E-NW. NW-SW. NE-W. NW-SW. NE-W. NW-SW. NE-W. NW-SE. SE. SE. SE-SE. SE-NE. SE-E.	23 12 21 23 17 14 7 7 11 20 26 24 22 21 11 27 28 28 28 28 17 21 21 21 21 21 21 21 21 21 21 21 21 21	1 1 5 2 1 10 0 0 0 2 2 2 2 5 1 4 2 2 2 2 2 2 2 2 2 4 1 2 2 4 1 2 2 4 4 1 2 2 4 4 1 2 4 4 1 2 4 4 4 1 2 4 4 4 4	30·0 30·22 30·23 29·90 29·74 29·88 29·86 29·47 29·36 29·32 29·52 29·77 30·05 29·86 29·47 29·60 30·00 29·84 29·47 29·67 30·23 30·24 30·23 30·24 30·22 30·22 30·22 30·24 3	30·14 30·22 30·12 29·71 29·82 29·91 29·70 29·23 29·31 29·31 29·36 30·00 29·66 30·02 30·03 30·03 30·03 30·02 30·03 30 30 30 30 30 30 30 30 30 30 30 30 3	32·0 32·0 32·0 32·0 32·0 32·0 32·0 32·0	50 60 60 60 60 60 60 60 60 60 60 57 57 57 57 56 56 56 55 55 54 53 53 53 54 54 55 55 55 55 55 55 55 55 55 55 55	29·0 29·0 29·0 29·0 30·0 30·0 30·0 30·0 30·0 30·0 30·0 3	48 48 48 48 48 48 48 48 48 48	Snow at night. Snow flurries. Light rain—snow flurries. Snow at night.  Rain at night; snow flurries day. Snow at night.  Snow—drifting. Snow—drifting. Drifting all day.  Rain at night. Rain—snow. Snow at night. Rain—snow. Snow at night. Rain—snow. Rain at night. Rain—snowflurries. Rain—snowflurries. Rain—snowflurries. Rain—snowflurries.

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JUNE, 1928

	Air 7	Temp.	V	Vind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
				Miles	Miles				Inches		Inches	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	37.6 39.8 38.0 37.0 37.0 41.0 42.0 39.0 43.0 37.0 44.0 44.0 41.5	33.8 33.8 34.0 32.0 32.0 32.5 32.0 32.5 32.0 32.5 32.0 32.5 32.0 32.5 32.0 32.5	NE-SE. NE-NW. NW-E. NW-W. NW-SE. SE-NW. SE-E. NW-SE. NW-SE. SE. SE. SE. SE. SE. NW. NW.	13 222 177 12 13 15 9 10 233 7 16 36 32 20	2 7 1 2 1 1 0 1 0 6 12 2 4	29·70 29·62 29·44 29·67 29·89 30·04 29·88 29·76 29·41 29·33 29·69 29·76 29·38 29·66	29·68 29·52 29·60 29·83 29·97 30·01 29·64 29·33 29·50 29·77 29·54 29·38 29·87	32·5 32·5 32·5 32·5	46 	31·5 31·5 32·5 32·5 32·5 32·5 32·5 32·5 32·5 32	44 44 43 43 43 43 42 40 38 36 33	Rain—snow—fog. Rain—fog. Fog. Fog. Rain—sleet p.m. Rain—sleet-fog. Fog—low clouds. Fog in a.m. Showers in a.m. Fog—rain. Fog—low clouds. Heavy rain in p.m. Heavy rain. Light sniw early
16 17	37·1 38·5	32·0 32·0	NW-N. NW-SW.	22 22	10 4	30·03 30·19	$30.15 \\ 30.28$	35·0 35·0		33·0 33·0	31 30	a.m. Low clouds—fog. Rain—fog—low
18 19	47·0 51·0	34·0 33·0	NW-W. NW-SW.	19 6	0	30·40 30·30	30·37 30·14	35·0 36·0		33·0 34·0	29 28	clouds.  Dense fog early a.m.  Breaking up in harbour.
20 21 22 23 24 25 26 27 28 29 30	49·0 50·8 47·1 45·2 49·1 46·8 61·4 64·0 57·4 44·4 48·1	40·5 34·8 35·1 35·4 32·6 31·8 33·5 40·0 36·7 36·0 36·1	SW-NE. NW-SW. NW-SW. NW-E. NW-E. NW-SE. NW-SE. NW-SE. NW-SE.	5 21 20 16 14 6 13 11 16 12 9	0 4 8 2 1 0 1 1 3	30·02 29·92 29·92 29·93 29·83 29·83 29·89 29·80 29·70 29·71 29·82	29·95 29·92 29·89 29·87 29·83 29·83 29·75 29·68 29·77 29·83	37·0 38·0 39·0 39·0 40·0 42·0 43·0 44·0 44·0		33.0 33.0 33.0 33.0 34.0 35.0 41.0 43.0 44.0 47.0	to walk	Low clouds—fog in a.m. Bay open in places.  " " Bay opening extensively. Bay 85 p.c. open and clear. Bay completely open. Foggy.

JULY, 1928

						3 (	11, 192	0				
	Air 7	Cemp.	1	Vind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1	44.2	36.2	NE-SE.	Miles 11	3	29.82	29.83	44.0	Inches	43.0	Inches	Foggy.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	46.9 42.6 58.9 57.2 57.8 51.5 63.1 56.4 53.0 61.5 71.0 66.2 72.8 73.2	35·1 36·0 35·2 42·4 47·2 39·5 45·0 42·3 34·1 44·2 46·0 50·8 48·7 50·0	SE. SE-NW. N-NW-SW. NW-SE. N-NW. NW-SW. NW-SW. NW-SW. NW-SE. NW-SW. NW-SE. NW-SW. NW-SE.	16 20 24 9 14 20 22 19 22 22 22 9 21 36 13	5 1 1 0 11 10 0 1 1 1 3 8 2	29·89 29·73 29·74 29·80 29·73 29·82 29·77 29·84 29·70 29·91 29·76 29·76	29·84 29·70 29·81 29·78 29·64 29·52 29·83 29·81 29·82 29·78 29·93 29·82 29·73	$\begin{array}{c} 42.0 \\ 42.0 \\ 52.0 \\ 52.0 \\ 49.0 \\ 48.0 \\ 51.0 \\ 50.0 \\ 52.0 \\ 53.0 \\ 55.0 \\ 55.0 \\ \end{array}$		$35 \cdot 0$ $34 \cdot 0$ $44 \cdot 0$ $43 \cdot 0$ $44 \cdot 0$ $43 \cdot 0$ $42 \cdot 0$ $43 \cdot 0$ $44 \cdot 0$ $47 \cdot 0$		Low clouds—rain.  Low clouds and fog most of day.  Air full of smoke.
16 17 18	79·6 73·2 48·9	45·2 41·8	NW-SE. NW-SW.	20 20 20	2 0	29·36 29·36 29·32	29·42 29·32	56·0 54·0 50·0		44·0 40·0 40·0		Atmosphere smoky. Rain in late p.m. Dense fog most of day.
19 20 21 22 23 24 25 26 27 28	50.8 71.0 65.4 57.1 62.0 55.9 52.0 55.1 50.8 51.4	40·0 44·0 39·5 40·0 35·4 36·9 43·8 43·0 38·2 38·6 37·8	N-NW-SW. NW-SE. E-NW. NW-SE. SE-NW. NW-SW. SW-NW. NW-SE. NW-E. NW.	23 32 36 6 20 19 36 25 17 15	10 3 1 1 2 3 1 2 1 0	29·32 29·44 29·50 29·69 29·66 29·73 29·36 29·52 29·96 30·06 30·07	29·37 29·56 29·57 29·69 29·75 29·52 29·41 29·76 30·00 30·07 30·02	$47 \cdot 0$ $44 \cdot 5$ $46 \cdot 5$ $49 \cdot 5$ $50 \cdot 5$ $49 \cdot 0$ $51 \cdot 5$ $54 \cdot 0$ $54 \cdot 5$ $53 \cdot 0$ $54 \cdot 0$		42·0 42·0 41·5 41·5 41·5 42·5 45·5 47·0 42·5 43·0		Fog and rain.  Heavy rain in p.m.  Rain in p.m.  Rain.  Showers.  Low clouds—log
29 30 31	49·0 54·6 58·6	40·8 39·2 40·9	NW-NE. NW-N. N-W.	15 18 18	5 7 1	29·98 29·88 29·67	29·94 29·83 29·56	54·5 55·5 56·0		43·0 42·5 43·5		p.m. Heavy fog—low clouds—rain. Fog and rain. Fog and low clouds

AUGUST, 1928

	Air T	Cemp.	V	Vind		Baro	meter	Fresh	Water	Salt	Water	
Date	Max.	Min.	Dir.	Max.	Min.	8 a.m.	8 p.m.	Temp.	Thick- ness	Temp.	Thick- ness	Remarks
1 2 3 4 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 30 31	62 · 6 49 · 0 65 · 0 64 · 0 75 · 0 64 · 0 75 · 0 64 · 0 65 · 0 64 · 0 68 · 0 68 · 0 68 · 0 68 · 0 68 · 0 63 · 0 51 · 0 63 · 0 52 · 0 61 · 0 63 · 0 63 · 0 53 · 0 54 · 0 55 · 0 63 · 0 53 · 0 54 · 0 63 · 0 63 · 0 63 · 0 63 · 0 63 · 0 63 · 0 53 · 0 54 · 0 55 · 0 63 · 0 63 · 0 63 · 0 63 · 0 63 · 0 53 · 0 54 · 0 55 · 0 56 · 0 57 · 0 58 · 0 58 · 0 59 · 0 50 · 0 51 · 0 53 · 0 54 · 0 55 · 0 56 · 0 57 · 0 58 · 0 59 · 0 50 · 0 51 · 0 51 · 0 52 · 0 53 · 0 54 · 0 55 · 0 56 · 0 57 · 0 58 · 0 58 · 0 58 · 0 59 · 0 50 · 0	40·4 43·5 42·0 43·0 43·0 43·0 43·0 43·0 44·0 41·0	NW-SE W-NW. N-NW. N-NW-SE. NW-SE. S-SE. SWE. NW-E. SWE. NW-NW. SW-NW. SW-NW. SW-NW. SW-NW. SW-NE. SE. S-SE. SW-SE. S-SW. SW-S. SW-S. SW-S. SW-S. SW-S.	Miles	Miles 2 6 1 0 1 4 3 3 4 4 1 1 1 2 2 8 8 3 3 3 1 1 1 1 4 4 4 4 4 5 5 6 6 5 5 0 0 0 1 1 2 2 2 2	29 29 29 29 29 29		48.5 55.5 56.5 58.5 58.5 58.5 58.5 57.5 58.0 57.5 58.0 57.5 58.5 57.0 57.5 58.5 58.5 58.5 57.0 58.5 58.5 58.5 58.5 58.5 58.5 58.5 58	Inches	Inches  43.5 43.5 44.5 44.5 44.5 48.0 47.0 44.5 44.5 44.5 44.5 41.0 41.5 45.5 44.5 41.0 41.5 42.5 41.0 42.5 41.0 41.5 42.5 41.0 41.5		Heavy fog till late. Fog in a.m. and p.m.  Showers. Rain. Fog at times, Heavy rain—fog. Rain in p.m. Showers. High SW. wind.  Fog and rain part of day. Heavy rain in p.m. Fog and rain. Rain and low clouds.  Foggy. Rain. Rain. Rain. Rain.

#### SEPTEMBER, 1928

Date	Air Tem	perature.		Wind		Mean Barome-	Sea-water
Date	Max.	Min.	Direction	Max.	Min.	ter	Temp.
1	Max.  43 47 47 45 56 46 40 38 40 44 43 55 46 53 49 44 57 47 42 43 42 43 31	Min.  33 33 37 39 43 34 34 31 40 34 37 38 48 39 46 38 37 33 35 33 32	NW-E. SW-N. NW-SW. S-NW. NW-W. NW-W. NW-SW. NW-SW. NW-SW. NW-SW. NE-SW. NW-SW. NE-SW. NW-SE. SE-SW. NW-SE. SE-NW. E-SE. N-SE. N-SE. NW-SW	Max.  Miles  13 19 14 8 45 39 27 20 1 19 28 19 28 19 13 17 21 23 16 15 17 26 18	Min.  Miles  1 7 3 0 6 10 11 3 0 74 3 1 1 8 6 6 6 3 2 3 5 11 1		

# METEOROLOGICAL OBSERVATIONS—CAPE HOPES ADVANCE

### OCTOBER, 1928

(No observations taken from 1st to 11th October, 1928, as Station not in working order.)

Date	Air Tem	perature.		Wind		Mean Barome-	Sea-water Temp.
Date	Max.	Min.	Direction	Max.	Min.	ter	Temp.
				Miles	Miles		
12	34	32	W-NW.	26	4	29.65	
13	33	28	NW.	28	18	29.62	
14	30	28	NW.	37	8	29.75	
15 (missing)	31	26	NW.	34	30	29.34	
17	29	$\frac{26}{26}$	NW.	46	15	29.55	
18	30	19	NW.	43	14	29.64	
19	26	19	S-NW.	23	10	29.58	
20 (missing)							
21	27	20	SW-NW.	22	6	29.54	
22	27	21	NW-SW.	17	2	29.64	
23	26	19	NW.	17	2	29.67	
24	27	21	NW.	31	11	29.73	
25	26	19	NW-N.	28	1	29.69	1
26	24	19 15	NW.	32 21	10	$   \begin{array}{c c}     29.72 \\     29.71   \end{array} $	
27	$\frac{25}{27}$	19	SE. SE.	21 25	10	29.71 $29.34$	
28	31	23	SE. SW.	18	8	29.34 $29.27$	
00	30	22	NW.	50	31	29.81	
30	25	18	SE.	18	8	29.16	

#### NOVEMBER, 1928

Date	Air Tem	perature		Wind		Mean Barome-	Sea-water
Date	Max.	Min.	Direction	Max.	Min.	ter	Temp.
1	25 28 28 31 32 34 36 34 27 28 30 25 27 27 27 27 24 25 24 22 24 23 32 31 31 32 31 31 32 31 31 32 31 31 31 32 31 31 31 31 31 31 31 31 31 31 31 31 31	18 20 25 23 28 30 23 20 22 19 21 21 22 22 18 17 17 17 17 17 15 19 12 8 9 16 13 3 	SE. NE-NW. NW-SE. SE. E-NE. NE-NW. NW. NW. NW. NW-S. S-NW. SW-E. E-NW. NW-SW-S. NW. SW-E. E-NE. NW. SW-S. SW-S. NW. SW-S. NW. SW-S. SW-S. N-NW. SW-S. SW-S. N-NW. N-NE. SW-S. N-NW. N-NE. SW-S. N-NW. N-NE. SW-S. N-NW. N-NE. SW-NW. N-SW. SW-W. N-SW. SW-NW. NW-SE.	Miles  18 38 40 59 52 44 30 32 36 29 19 13 20 29 19 24 52 40 37 16 20 25 16 18 26 17	Miles  8 8 8 8 40 20 4 30 29 18 6 4 5 16 7 9 20 4 11 10 8 7 8 8 9 3 17 1 0 0	29·16 29·24 29·47 29·16 29·88 28·97 29·68 29·67 29·59 29·59 29·57 29·57 29·55 29·84 29·75 29·45 29·16 29·25 28·96 29·23 29·23 29·16 29·35 29·44 29·35 29·44 29·49 29·08 28·85 29·44 29·49 29·08 29·48 29·49 29·48 29·49 29·48	30-6

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# METEOROLOGICAL OBSERVATIONS—CAPE HOPES ADVANCE—Concluded

#### DECEMBER, 1928

Date	Air Temperature		Wind.			Mean	
25400	Max.	Min.	Direction	Max.   Min.		Barome- ter	Sea-wate Temp.
				Miles	Miles		
1	13	10	NW-SE.	17	0	29.58	
2	17	8	S-SE.	27	5	29.70	
	19	11	S-NE.	49	3	29.46	
1	12	-8	NW-S.	27	5	29.91	
	18	4	E-NW.	30	3	29.74	
	24	17	NW.	60	20	29.18	
	16	-18	N-SW.	45	13	29.14	
	7	-5	S.	32	18	29.71	
	19 21	5 13	S-NW.	35	- 17	29.34	
)	15	10	S-NW.	38	20	29.53	
2	16	11	SW-SE.	33 33	13	29.72	
3	29	15	W-NW.	50	16 13	29.67 $29.14$	
	24	13	NW.	60	21	29.14	
5	16	11	NW.	35	20	29.35	
3	17	10	NW.	21	0	29.51	
7	19	7	S-SE.	33	16	29.14	
3	28	11	SE-NW.	42	3	28.88	
9	28	17	N-NW.	43	20	28 - 40	
)	20	3	SW-NW.	33	22	28.74	
1	5	-2	SW-NW.	25	15	29 · 29	
2	7	-6	NW.	27	17	29.33	
3	17	-5	S-NW.	30	12	29.33	
	17	0	S-NW.	53	9	28.63	
	18	-13	W-NW.	28	14	29 · 13	
6	-8	-19	SW-NW.	25	11	29.25	
7	-1	-18	W-NW.	15	1	29.50	
8	4	-5	NW-E.	33	4	29.54	
9	13	2	NE-SE.	49	22	29.39	
0	20		NE-NW.	40	18	29.14	
L	20	0	NW-W.	50	28	29.13	

# APPENDIX No. 11

# HUDSON STRAIT EXPEDITION, 1928

WATER TEMPERATURES AS TAKEN FROM THE C.G.S. "MONTCALM" ON VOYAGE
TO HUDSON STRAIT AND RETURN

June 26.         9 a.m.         12 miles east of Ellis Bay—Anticosti           27.         9 a.m.         10 miles east of Heath point.           27.         1 p.m.         40 miles east of Heath point.           28.         9 a.m.         Off Whittle bark.           28.         9 a.m.         Off Great Makatina Island.           29.         9 a.m.         Off Greenly Island.           5 p.m.         5 p.m.         Forteau bay.           5 p.m.         Off St. Michael's bay.           5 p.m.         Off Cape Hopes Advance.           5 p.m.         Off Gready Island.           0 ff Cape Hugford.         Off Cape Mugford.           5 p.m.         Off Gready Great Harrison.           0 ff Four Peaks.         Off Cape Mugford.           5 p.m.         Off Edward Harrison.           4 p.m.         Off Button Islands.           5 p.m.         Off Button Islands.           5 p.m.         Off Button Islands.           5 p.m.         Off Apatok Island.           5 p.m.         Off Cape Hopes Advance.           6 p.m.         Off Cape Hopes Advance.           5 p.m.         Off Digres Island.           8 p.m.         Off Digres Island.           9 p.m.         Off Cape Hop	Degre Fah:
5 p.m.   36 miles west of South point.   27   1 p.m.   40 miles east of Heath point.   27   1 p.m.   40 miles east of Heath point.   28   9 a.m.   0ff Waittle bark   28   9 a.m.   0ff Great Makatina island.   11 miles east of Greenly island.   29   9 a.m.   Forteau bay.   5 p.m.   0f St. Michael's bay.   0f Gready island.   30   9 a.m.   0f St. Michael's bay.   0ff Gready island.   30   9 a.m.   0ff Cape Harrison.   30   9 a.m.   0ff Cape Mugford.   30   30   30   30   30   30   30   3	50
27.   9 a.m.   10 miles east of Heath point.   27.   1 p.m.   40 miles east of Heath point.   28.   9 a.m.   Off Whittle bank.   28.   9 a.m.   Off Whittle bank.   29.   9 a.m.   Off Great Makatina island.   29.   9 a.m.   Forteau bay.   5 p.m.   7 p.m.   Forteau bay.   30.   9 a.m.   Off St. Michael's bay.   30.   9 a.m.   Off Cape Harrison.   30 miles N. of Cape Harrison.   3 p.m.   Off Cape Mugford.   3 p.m.   Off Cape Mugford.   3 p.m.   Off Cape Mugford.   3 p.m.   Off Deads harbour.   20 miles N. of Cape Mugford.   3 p.m.   Off Button islands.   4 p.a.m.   5 p.m.   Off Button islands.   4 p.a.m.   5 p.m.   Off Abpatok island.   5 p.m.   Off Cape Hopes Advance.   Off Deads Hopes Advance.   Off Deads Hopes Advance.   Off Deads Hopes Advance.   Off Deads Bay.   Off Deads Bay.   0 p.m.   Off Deads Bay.   0 p.m.   0 p.m.   Off Deads Bay.   0 p.m.   0 p	91.
27.	50.
29   9 a.m.   Forteau bay   Off Capedy island.   Off Cape Harrison.   Off Hopedale harbour.   Off Cape Mugford.   2	50.
29   9 a.m.   Forteau bay   Off Capedy island.   Off Cape Harrison.   Off Hopedale harbour.   Off Cape Mugford.   2	48
99. 9 a.m. Forteau bay. 5 p.m. Of St. Michael's bay. Of St. Michael's bay. Of St. Michael's bay. Of Gready island.  5 p.m. Off Gready island. Off Hopedale harbour. Off Hopedale harbour. Off For Peaks. 5 p.m. Off Button islands. 4 0 a.m. Port Burwell harbour. 5 p.m. Off Akpatok island.  5 p.m. Off Cape Hopes Advance. Off Dyke head.  5 p.m. Off Dyke head.  5 p.m. Off Big island.  9 a.m. Off Wakeham bay. Dentrance to Wakeham bay.  5 p.m. Off Charles island. Off Carles island. Off Sp.m. Off Sugluk inlet. Dentrance to Wakeham bay. Dentra	45
5 p.m.   Forteau bay.	43
30	44
July 1	45
5 p.m.	46
2 9 a.m. Off Cape Mugford 5 p.m. Off Button islands 5 p.m. Off Burwell harbour 5 p.m. Off Cape Hopes Advance. 6 9 a.m. Off Cape Hopes Advance. 7 9 a.m. Off Dyke head 7 9 a.m. Off Wakeham bay. 8 9 a.m. Off Wakeham bay. 9 9 a.m. Off Charles island 10 9 a.m. Off Charles island 11 9 a.m. Off Cape Hopes Advance. 12 9 a.m. Off Cape Hopes Advance. 13 9 a.m. Off Cape Hopes Advance. 14 9 a.m. Off Wakeham bay. 15 p.m. Off Digges island 16 5 p.m. Off Erik cove. 17 9 a.m. Off Cape Hopes Advance. 18 9 a.m. Off Charles island 19 9 a.m. Off Charles island 10 9 a.m. Off Charles island 11 9 a.m. Sugluk inlet. 12 9 a.m. Off Cape Weggs. 14 9 a.m. Off Cape Weggs. 15 p.m. Wakeham bay. 16 9 a.m. Wakeham bay. 17 9 a.m. Wakeham bay. 18 9 a.m. Wakeham bay. 19 9 a.m. Wakeham bay. 19 9 a.m. Wakeham bay. 10 9 a.m. Wakeham bay. 11 9 a.m. Wakeham bay. 12 9 a.m. Wakeham bay. 13 9 a.m. Wakeham bay. 14 9 a.m. Wakeham bay. 15 p.m. Wakeham bay. 16 9 a.m. Wakeham bay. 17 9 a.m. Wakeham bay. 18 9 a.m. Off Cape Hopes Advance. 19 9 a.m. Off Cape Hopes Advance. 19 9 a.m. Off Cape Hopes Advance. 20 9 a.m. Off Cape Hopes Advance. 21 9 a.m. Off Akpatok island. 22 9 a.m. Off Akpatok island.	39
20 miles N. of Cape Mugtord   3	
3	
5 p.m.   Off Button islands   Port Burwell harbour.	37
5	34
5	36
6         9 a.m.         Off Cape Hopes Advance           5 p.m.         Off Diama bay           7         9 a.m.         Off Dyke head           5 p.m.         Off Big island           8         9 a.m.         Off Wakeham bay.           9         9 a.m.         Entrance to Wakeham bay.           10         9 a.m.         Off Charles island.           10         9 a.m.         Off Digges island.           11         9 a.m.         Off Erik cove.           11         9 a.m.         Sugluk inlet.           5 p.m.         Sugluk inlet.         Sugluk inlet.           12         9 a.m.         Off Cape Weggs.           5 p.m.         Wakeham bay.         Wakeham bay.           14         9 a.m.         Wakeham bay.           15         9 a.m.         Wakeham bay.           16         9 a.m.         Wakeham bay.           16         9 a.m.         Wakeham bay.           17         9 a.m.         Wakeham bay.           18         9 a.m.         Wakeham bay.           20         9 a.m.         "           5 p.m.         "         "           20         9 a.m.         "      <	32
6. 9 a.m. Off Cape Hopes Advance. 7 5 p.m. Off Disna bay. 7 9 a.m. Off Dyke head. 8 9 a.m. Off Wakeham bay. 9 9 a.m. Off Wakeham bay. 9 9 a.m. Entrance to Wakeham bay. 9 10 9 a.m. Off Charles island. 10 9 a.m. Off Erik cove. 11 9 a.m. Sugluk inlet. 12 9 a.m. Off Sugluk inlet. 13 9 a.m. Off Sugluk inlet. 14 9 a.m. Off Cape Weggs. 15 p.m. Wakeham bay. 16 9 a.m. Wakeham bay. 17 9 a.m. Wakeham bay. 18 9 a.m. Wakeham bay. 19 9 a.m. Wakeham bay. 11 9 a.m. Wakeham bay. 12 9 a.m. Wakeham bay. 13 9 a.m. Wakeham bay. 14 9 a.m. Wakeham bay. 15 p.m. Wakeham bay. 16 9 a.m. Wakeham bay. 17 9 a.m. Wakeham bay. 18 9 a.m. Wakeham bay. 19 9 a.m. Off Cape Hopes Advance. 19 9 a.m. Off Cape Hopes Advance. 20 9 a.m. Off Cape Hopes Advance. 5 p.m. Off Cape Hopes Advance.	0.4
5 p.m.         Off Diena bay           6 p.m.         Off Dyke head           8 p.m.         Off Big island           9 a.m.         Off Wakeham bay           9 a.m.         Entrance to Wakeham bay           10 p.m.         Off Charles island           10 p.m.         Off Charles island           10 p.m.         Off Dieges island           5 p.m.         Off Erik cove           11 p.m.         Sugluk inlet           5 p.m.         Sugluk inlet           12 p.m.         Off Sugluk inlet           5 p.m.         Off Cape Weggs.           5 p.m.         Wakeham bay           14 p.m.         Wakeham bay           15 p.m.         Wakeham bay           15 p.m.         Wakeham bay           16 p.m.         Wakeham bay           17 p.m.         Wakeham bay           18 p.m.         Off Cape Hopes Advance           19 p.m.         Off Cape Hopes Advance           20 p.m.         Off Cape Hopes Advance           5 p.m.         Off Cape Hopes Advance           20 p.m.         Off Cape Hopes Advance           20 p.m.         Off Cape Hopes Advance           20 p.m.         Off Cape Hopes Advance           22	
8         9 a.m.         Off Wakeham bay.           5         9 a.m.         Unkeham bay.           9         9 a.m.         Entrance to Wakeham bay.           10         9 a.m.         Off Charles island.           10         9 a.m.         Off Digges island.           5         p.m.         Off Erik cove.           11         9 a.m.         Sugluk inlet.           5         p.m.         Sugluk inlet.           12         9 a.m.         Off Sugluk inlet.           13         9 a.m.         Off Cape Weggs.           5         p.m.         Wakeham bay.           14         9 a.m.         Wakeham bay.           15         9 a.m.         Wakeham bay.           15         9 a.m.         Wakeham bay.           16         9 a.m.         Wakeham bay.           17         9 a.m.         Wakeham bay.           18         9 a.m.         Wakeham bay.           19         9 a.m.         "           19         9 a.m.         "           20         9 a.m.         "           21         9 a.m.         Off Cape Hopes Advance.           3         5 p.m.         "	
8         9 a.m.         Off Wakeham bay.           5         9 a.m.         Unkeham bay.           9         9 a.m.         Entrance to Wakeham bay.           10         9 a.m.         Off Charles island.           10         9 a.m.         Off Digges island.           5         p.m.         Off Erik cove.           11         9 a.m.         Sugluk inlet.           5         p.m.         Sugluk inlet.           12         9 a.m.         Off Sugluk inlet.           13         9 a.m.         Off Cape Weggs.           5         p.m.         Wakeham bay.           14         9 a.m.         Wakeham bay.           15         9 a.m.         Wakeham bay.           15         9 a.m.         Wakeham bay.           16         9 a.m.         Wakeham bay.           17         9 a.m.         Wakeham bay.           18         9 a.m.         Wakeham bay.           19         9 a.m.         "           19         9 a.m.         "           20         9 a.m.         "           21         9 a.m.         Off Cape Hopes Advance.           3         5 p.m.         "	32
9         9 a.m.         Wakeham bay           5 p.m.         Off Charles island.           10         9 a.m.         Off Digges island.           11         9 a.m.         Off Erik cove.           12         9 a.m.         Sugluk inlet.           12         9 a.m.         Off Sugluk inlet.           13         9 a.m.         Off Cape Weggs.           5 p.m.         Wakeham bay.           14         9 a.m.         Wakeham bay.           5 p.m.         Wakeham bay.           15         9 a.m.         Wakeham bay.           5 p.m.         Wakeham bay.           16         9 a.m.         Wakeham bay.           17         9 a.m.         Wakeham bay.           18         9 a.m.         Wakeham bay.           19         9 a.m.         "           5 p.m.         "           20         9 a.m.         "           5 p.m.         "           21         9 a.m.         "           22         9 a.m.         Off Cape Hopes Advance           5 p.m.         0ff Cape Hopes Advance           9 a.m.         "           5 p.m.         "           22 <td> 32</td>	32
5 p.m.	33
5 p.m.	35
10. 9 a.m. Off Digges island.  5 p.m. Off Erik cove.  11. 9 a.m. Sugluk inlet.  5 p.m. Off Sugluk inlet.  12. 9 a.m. Off Cape Weggs.  5 p.m. Wakeham bay.  14. 9 a.m. Wakeham bay.  5 p.m. Wakeham bay.  15. 9 a.m. Wakeham bay.  16. 9 a.m. Wakeham bay.  5 p.m. Wakeham bay.  17. 9 a.m. Wakeham bay.  18. 9 a.m. Uakeham bay.  19. 9 a.m. Wakeham bay.  19. 9 a.m. Wakeham bay.  20. 9 a.m. "  5 p.m. "  21. 9 a.m. "  22. 9 a.m. Off Cape Hopes Advance.  5 p.m. "  23. 9 a.m. "  44. 9 a.m. "  5 p.m. "  5 p.m. "  6 p.m. "  7 p.m. "  8 p.m. "  9 p.m. "  9 p.m. "  19 p.m. "  19 p.m. "  19 p.m. "  20 p.m. "  21 p.m. Off Cape Hopes Advance.  5 p.m. "  22 p.m. Off Cape Hopes Advance.  5 p.m. "  23 p.m. "  44. 9 a.m. "  5 p.m. "  5 p.m. "  6 p.m. Off Cape Hopes Advance.  6 p.m. Off Akpatok island.  9 p.m. Port Burwell harbour.	35
5 p.m.   Off Erik cove.   Sugluk inlet.   Sugluk inlet.     12	
11       9 a.m.       Sugluk inlet.         5 p.m.       Off Sugluk inlet.         13       9 a.m.       Off Cape Weggs.         5 p.m.       Wakeham bay.         14       9 a.m.       Wakeham bay.         5 p.m.       Wakeham bay.         5 p.m.       Wakeham bay.         5 p.m.       Wakeham bay.         5 p.m.       Wakeham bay.         16       9 a.m.       Wakeham bay.         5 p.m.       Off Cape Hopes Advance.         17       9 a.m.       "         5 p.m.       "         18       9 a.m.       "         5 p.m.       "         20       9 a.m.       "         5 p.m.       "         21       9 a.m.       Off Cape Hopes Advance.         5 p.m.       "         21       9 a.m.       "         22       9 a.m.       Port Burwell harbour.	37
12	42
5 p.m.   Chales inlet   Off Cape Weggs   Sp.m.   Wakeham bay   Sp.m.   Off Cape Hopes Advance   Sp.m.	
13. 9 a.m. Off Cape Weggs.  5 p.m. Wakeham bay.  5 p.m. Wakeham bay.  5 p.m. Wakeham bay.  5 p.m. Wakeham bay.  16. 9 a.m. Wakeham bay.  5 p.m. Off Cape Hopes Advance.  5 p.m. "  18. 9 a.m. "  5 p.m. "  19. 9 a.m. "  5 p.m. "  20. 9 a.m. "  5 p.m. "  21. 9 a.m. Off Cape Hopes Advance.  5 p.m. "  22. 9 a.m. Off Cape Hopes Advance.  5 p.m. "  23. Off Cape Hopes Advance.  5 p.m. "  6 p.m. "  7 p.m. "  8 p.m. "  9 p.m. "  9 p.m. "  19 p.m. "  19 p.m. "  10 p.m. "  10 p.m. "  11 p.m. "  12 p.m. "  13 p.m. "  14 p.m. "  15 p.m. "  15 p.m. "  15 p.m. "  16 p.m. "  17 p.m. "  18 p.m. "  19 p.m. "  19 p.m. "  20 p.m. "  21 p.m. Off Cape Hopes Advance.  22 p.m. Off Cape Hopes Advance.	41 39
5 p.m.   Wakeham bay.   Wakeham bay.	
14. 9 a.m. Wakeham bay  15 p.m. Wakeham bay  5 p.m. Wakeham bay  16 9 a.m. Wakeham bay  5 p.m. Off Cape Hopes Advance  17 9 a.m. Diana bay  18 9 a.m. "  19 9 a.m. "  19 9 a.m. "  20 9 a.m. "  5 p.m. "  21 9 a.m. Off Cape Hopes Advance  5 p.m. "  22 9 a.m. Off Cape Hopes Advance  5 p.m. "  23 p.m. "  4 p.m. Off Cape Hopes Advance  5 p.m. "  5 p.m. "  24 p.m. Off Cape Hopes Advance  5 p.m. Off Cape Hopes Advance  5 p.m. The provided Hopes Advance H	1 10
5 p.m. Wakeham bay. 5 p.m. Wakeham bay. 5 p.m. Wakeham bay. 16. 9 a.m. Wakeham bay. 5 p.m. Off Cape Hopes Advance. 5 p.m. " 17. 9 a.m. " 18. 9 a.m. " 19. 9 a.m. " 19. 9 a.m. " 20. 9 a.m. " 21. 9 a.m. Off Cape Hopes Advance. 5 p.m. " 21. 9 a.m. Off Cape Hopes Advance. 5 p.m. " 22. 9 a.m. Port Burwell harbour.	] 40
5 p.m.   Wakeham bay   Wakeham bay   Wakeham bay	39
16. 9 a.m.   Wakeham bay.   17. 9 a.m.   Off Cape Hopes Advance   18. 9 a.m.   " 19. 9 a.m.   " 19. 9 a.m.   " 20. 9 a.m.   " 21. 9 a.m.   Off Cape Hopes Advance   5 p.m.   " 21. 9 a.m.   Off Cape Hopes Advance   5 p.m.   Off Cape Hopes Advance   22. 9 a.m.   Port Burwell harbour	38
5 p.m.   Off Cape Hopes Advance.	38
17. 9 a.m. 5 p.m. "  18. 9 a.m. "  19. 9 a.m. "  19. 9 a.m. "  20. 9 a.m. "  20. 9 a.m. "  21. 9 a.m. "  21. 9 a.m. Off Cape Hopes Advance  5 p.m. Off Akpatok island  22. 9 a.m. Port Burwell harbour.	38
18. 9 a.m. " 5 p.m. " 5 p.m. " 19. 9 a.m. " 5 p.m. " 20. 9 a.m. " 5 p.m. " 21. 9 a.m. Off Cape Hopes Advance 5 p.m. Off Akpatok island 22. 9 a.m. Port Burwell harbour.	40
18. 9 a.m. " 5 p.m. " 19. 9 a.m. " 20. 9 a.m. " 21. 9 a.m. Off Cape Hopes Advance. 5 p.m. Off Akpatok island. 22. 9 a.m. Port Burwell harbour.	] 39
19. 9 a.m. " 5 p.m. " 20. 9 a.m. " 5 p.m. " 21. 9 a.m. Off Cape Hopes Advance. 5 p.m. Off Akpatok island. 22. 9 a.m. Port Burwell harbour.	
9 a.m. " 20. 9 a.m. " 5 p.m. " 5 p.m. " 5 p.m. " 21. 9 a.m. Off Cape Hopes Advance 5 p.m. Off Akpatok island 22. 9 a.m. Port Burwell harbour.	
20. 9 a.m. " 5 p.m. " 21. 9 a.m. Off Cape Hopes Advance 5 p.m. Off Akpatok island 22. 9 a.m. Port Burwell harbour.	
21. 9 a.m. Off Cape Hopes Advance	0.77
21       9 a.m.       Off Cape Hopes Advance         5 p.m.       Off Akpatok island         22       9 a.m.       Port Burwell harbour	0.0
5 p.m. Off Akpatok island	
22 9 a.m.   Port Burwell harbour	36
1 5 n m   Port Burwell harbour	36
	35
23 9 a.m. Off Button islands	34 32
5 pm Off Resolution island. 24 9 a.m. Button islands	
5 p.m.   "	
25 9 a.m. "	

# HUDSON STRAIT EXPEDITION, 1928—Continued

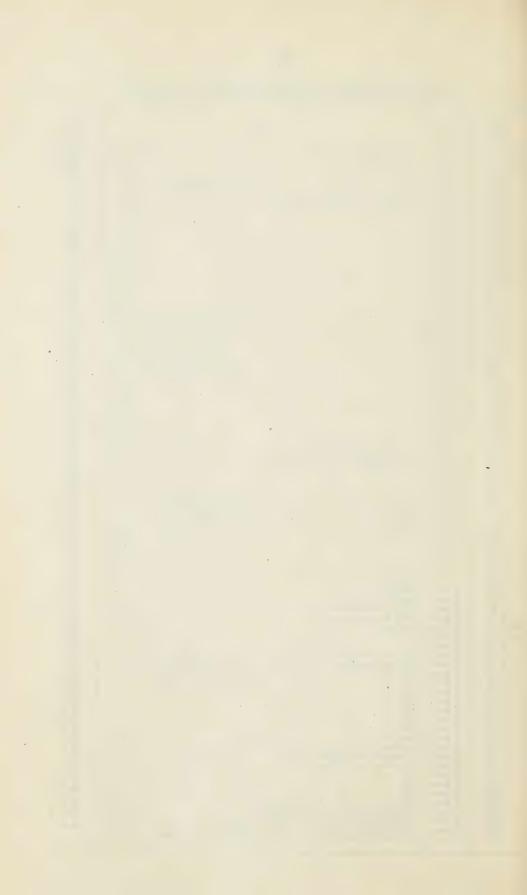
							Degree
Date Time			Place				
July 2	26	9 a.m.				,	
6	27	5 p.m. 9 a.m.	Off Port B	urwell			35.0
4	28	5 p.m. 9 a.m.	Off Akpato Anchored (	ok island Cape Hope	s Advan		35.0
	29	5 p.m. 9 a.m.	46	"	66		36.0
		5 p.m.	66	"	66		36.0
,	30	7 a.m. 5 p.m.	46	66	66		36.0
	31	7 a.m. 5 p.m.	66	"	66		
Aug.	1	7 a.m. 5 p.m.	66	66	66		. 38.0
	2	7 a.m.	"	"	"		. 38.0
	3	5 p.m. 7 a.m.	"	66	66		39.0
	4	6 p.m. 7 a.m.	"	66	"		
		7 p.m.	"	"	66		39-0
	5	7 a.m. 7 p.m.	"	66	"		40.0
	6	7 a.m. 7 p.m.	"	"			40.0
	7	7 a.m. 7 p.m.					
	8	7 a.m.	66	<i>د</i> د	66		40.
	9	7 p.m. 7 a.m.			( C		40.
	10	5 p.m. 8 a.m.	58 miles W	of Hopes	Advanc	e	40.
	11	7 p.m. 9 a.m.	Wakeham	bay			41.
		6 p.m.	15 miles W				38.
	12	9 a.m. 6 p.m.	South side	Charles is	sland		45.
	13	9 a.m. 5 p.m.	Off Notti	ngham isla	nd		35.
	14	9 a.m. 7 p.m.	Erik cove				40.
	15	10 a.m. 6 p.m.	Nottingha	m island.			34.
	16	7 a.m.	66	"			34.
	17	7 p.m. 9 a.m.	"				. 35.
	18	7 p.m. 10 a.m.	Off Erik	970			44.
	19	7 p.m. 9 a.m.	Sugluk inl	est			44.
		7 p.m.	OC Woles				40.
	20	9 a.m. 6 p.m.	Walaham	hav			40.
	21	9 a.m. 6 p.m.	1 40 miles V NW. side	V. of Wake. Charles is	ham bay land		39
	22 23		ken—gale	all day.) e Charles	island		40
		6 p.m.	66	"			
	24	6 p.m.	66	"			40
	25	9 a.m. 6 p.m.		66			40
	26	9 a.m. 6 p.m.	Off Suglu	" k inlet			36
	27	7 p.m.	Suklet inl	et			43
	27	9 a.m. 6 p.m.	"				74
i	28	9 a.m. 6 p.m.	66				43
	29	9 a.m. 6 p.m.	20 miles v	vest of Sug	luk		42
	30	8 a.m. 6 p.m.	EATR COVE				**

# HUDSON STRAIT EXPEDITION, 1928—Continued

Date	Time	Place					
ug. 31	8 a.m.	· ·	- F				
	6 p.m.	"					
ept. 1	8 a.m. 6 p.m.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
2	9 a.m.	10 miles off Nottingham.					
	6 p.m.	Nottingham island					
3	9 a.m.	u u					
4	7 p.m. 9 a.m.	Erik cove					
	7 p.m.	"					
5	9 a.m.	<i>u</i>					
6	7 p.m. 9 a.m.	"					
	6 p.m.	u					
7	9 a.m.						
	6 p.m.	« «					
8	9 a.m. 7 p.m.	«					
9	9 a.m.	Nottingham island.					
ж.о.	7 p.m.	Off Sugluk inlet					
10	9 a.m.	Off Cape Weggs					
11	7 p.m. 9 a.m.	Off Wakeham bay. Wakeham bay.					
	7 p.m.	Wakeham bay					
12	9 a.m.	Off Burgoyne bay					
13	7 p.m.	Cape Hopes Advance.					
10	9 a.m. 7 p.m.	u u					
14	9 a.m.	66 66					
	7 p.m.	66 66					
15	9 a.m.	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
16	7 p.m. 9 a.m.	Wakeham bay					
	7 p.m.	**					
17	9 a.m.	66					
18	7 p.m.	ш					
	9 a.m. 7 p.m.	"	4				
19	9 a.m.	30 miles east of Wakeham bay	6				
+ 00	7 p.m.	Cape Hopes Advance					
ot. 20	9 a.m. 7 p.m.	Cape Hopes Advance	6				
21	9 a.m.	Acadia cove.	5				
00	7 p.m.	"	6				
22	9 a.m.	«	3				
23	7 p.m. 9 a.m.		6				
1	7 p.m.	«	6				
24	9 a.m.	"	6				
25	7 p.m. 9 a.m.	"	5				
	7 p.m.	"	9				
26	9 a.m.	46	60 60				
27	7 p.m.	u u	3				
21	9 a.m. 7 p.m.	***************************************	3				
28	9 a.m.	Abeam Button islands.	3				
	7 p.m.	FOR Durwell	3				
29	9 a.m.	of littles west of Durwell	3				
30	9 a.m.	Tiopes Advance	3				
	7 p.m.	"	3				
. 1	9 a.m.	**	3				
2	7 p.m.	"	3				
4	9 a.m. 7 p.m.	***************************************	3				
3	9 a.m.	Wakeham bay	3				
	7 p.m.		3				
4	9 a.m.		3				
5	7 p.m.	"	3				
	9 a.m. 7 p.m.	66	3				
6	9 a.m. 7 p.m.	« ····································	3				

# HUDSON STRAIT EXPEDITION, 1928—Concluded

Date	Time	Place	Degre
	111110		Fahr
Oct. 8	9 a.m.	Hopes Advance	35.
9	7 p.m. 9 a.m.	Cape Hopes Advance.	36 · i
0	7 p.m.	" "	35.
10	9 a.m. 7 p.m.	" " 10 miles east of Port Hopes Advance.	35 · I
11	9 a.m.	Port Burwell	38.
12	7 p.m.	u	37 · . 38 · .
	9 a.m. 7 p.m.	(¢	37.
13	9 a.m.	"	36 ·
14	7 p.m. 9 a.m.	"	36.
	7 p.m.	44	36.
15	9 a.m. 7 p.m.	"	35. 35.
16	9 a.m.	"	36.
17	7 p.m. 9 a.m.	«	35 · 35 ·
	7 p.m.	"	35.
18	9 a.m. 7 p.m.	"	35 · 35 ·
19	9 a.m.	"	35.
20	7 p.m. 9 a.m.	"	35· 35·
	7 p.m.	"	35.
21	9 a.m.	"	35 · 34 ·
22	7 p.m. 9 a.m.	"	33
23	7 g.m.	u	34 · 34 ·
	9 a.m. 7 p.m.	"	34
24	9 a.m.	10 miles north of Burwell	33 · 35 ·
	12 noon 7 p.m.	Button islands, 10 ft. below surface	34
25	9 a.m.	W W W	34
26	7 p.m. 9 a.m.	Button islands	33
		Surface	33
27	7 p.m. 9 a.m.	Surface	33
	7 p.m.	Surface	33
28	9 a.m. 7 p.m.	66	32
29	9 a.m.	66	33
	7 p.m.	10 ft. below surface	33
30	9 a.m.	10 ft. below surface	33
31	7 p.m. 9 a.m.	Surface. 10 ft. below surface.	33
	7 p.m.	10 ft. below surface	33
ov. 1	9 a.m. 7 p.m.	Surface	33
2	9 a.m.	66	33
3	7 p.m. 9 a.m.	Surface—after heavy snowfall. 6 ft. below surface	32
	7 p.m.	6ft " "	32
4	9 a.m. 7 p.m.	6 ft. " " "	32
5	9 a.m.	1.6 ft " " " " " " " " " " " " " " " " " "	33 33
6	7 p.m. 9 a.m.	6 f4 (6 (6	33
	7 p.m.	6 \$+ 66	33 33
7	9 a.m. 7 p.m.	SurfaceSurface	33
8	9 a.m.	Surface. Abeam Cape Chidley	34
9	7 p.m.	90 miles south Cape Unidley	34
	7 p.m.	340 " " "	34
10		000	35
11	10 a.m.	Off Flot island Gulf of St Lawrence	38 36
12		Off North point, Anticosti island. South end Hare island.	36
13		Arrived Quebec 8.35 a.m., 14th November.	





Base "B"

Left to Right—Power House, Camp, Storehouse, Temporary Shack, Larch, Stanley, Men's Dwelling.



BASE "B"

Left to Right—Temporary Shack, Men's Dwelling, Storehouse, Power House.



BASE "B"

Left to Right—Camp, Temporary Shack, Derrick, Men's Dwelling, Inlet beyond Derrick.



Base "B"

View from far side of Inlet.—Left to Right—Blubber House, Scow unloading, Buildings, Radio Mast.



BASE "B"
Erecting Buildings.



Base "B"
Unloading Fusilage Case.



 $$\rm Base$  "B" Fusilage Case being hauled up Slipway by Tractor.



Base "B" Fusilage Case being lifted by Derrick.



Base "B" Hauling Gasolene up Slipway.



Base "B"
Unloading Lumber to Slipway.



BASE "B"
Launch bringing in Scow with Fusilage Case.



Base "B"
Stanley taking Coal from Larch.





RASE "B"

Completed Buildings.—Left to Right—Temporary Shack, Men's Dwelling, Officer's Dwelling, Storehouse, Power House, Plane to Ground Radio Mast, Marconi Mast.



Base "C"
Wakeham Bay—Buildings on Flat abreast of Stanley—Hudson's Bay Company Post in right foreground.



BASE "(" Left to Right-Storehouse, Men's Dwelling, entrance to Bay, Revillon Freres, Hudson's Bay Company.



Showing improved Beach.

Left to Right—Scow grounded with spare wing case. Stanley alongside Larch coaling.

Right foreground—tractor and stoneboats.



Base "C" Moth plane.



 $${\rm Base}$  "A" Left to Right—Entrance to Mission Cove, Hudson's Bay Company Cove and Post, C.G.S. Stanley.



 ${\rm Base} \ ``A"$  Mission Cove taken from Mission looking towards Hudson's Bay Company Cove.



 ${\rm Base} \ {\rm ``A''}$  Fox Harbour looking towards Hudson Strait. Derrick marks Hangar Site.



Base "A"
Boulders being removed on Site of Power House, Mission in background.



 ${\rm Base~``A''}\\ {\rm Hangars~were~erected~in~little~Flat~near~Derrick.~Scow~being~unloaded.~Many}\\ {\rm Boulders~had~to~be~removed.}$ 



 $$\operatorname{Base}$  "A" General View of Mission Cove. Launch towing Loaded Scow.



Base "B"
Camp Site from Hill north of Base.



Base "B"
Aircraft Wireless Receiving Set and Operator.



 $$\operatorname{Base}$  "B" Aircraft "HJ" being towed out of Hangar by Tractor.



BASE "C"
Launching Aircraft "HE" for first Flight on Floats, 1928.



Base "(" Aircraft "HE" on Land Floe Ice at Entrance to Wakeham Bay.



Base "C"
Native Tent at Wakeham Bay.



Base "C"
Group of Eskimo—Wakeham Bay.



Base "(" Eskimo Igloos—Wakeham Bay.



 $\begin{array}{c} {\rm Base} \ \ ^{o}{\rm A}^{o} \\ {\rm Hangars} \ -{\rm Rocks} \ {\rm visible} \ {\rm at \ Low \ Tide}. \end{array}$ 



Base "A"
Native Robert Anakatok (Bobby).



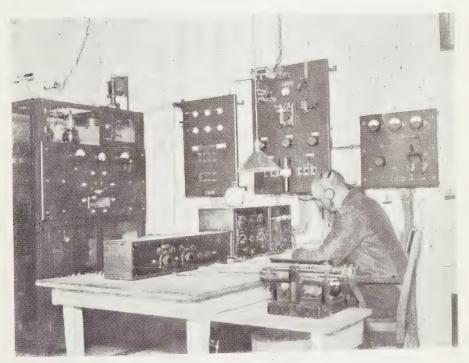
Base "A"
Aircraft "HH"—Flight Lieut. Coghill, Messrs. Hall, Kircaldy, Torris.



 ${\rm Base}~{\rm ``A''}$  Fokker Aircraft "HJ", "HH" and "HI" on Ice during Search for Missing Aircraft.



BASE "A"
Aircraft landing on Ice.



Wireless Room—Base "C"—Wakeham Bay showing General Arrangement—Radio Engineer Harold Walsh, operating.



Power House Base "C"—Wakeham Bay—R.C.C.S. Mast.



Fifteen Miles off Southeast Point Nottingham Island—March 31st, 1928. Altitude 3,000 Ft.



BASE "B"

Fifteen Miles East of Port de Boucherville—Nottingham Island. Altitude 3,000 Ft.



BASE "B"

Ice in Strait—10 Miles off Southeast End Nottingham Island. May 7th, 1928.

Altitude 5,600 Ft.



Base "B" Hangar Site from Air, taken at Altitude of 1.000 Ft.



BASE "B" Aircraft "G-CAHE" in Air.



Base "B"

Ice in Strait—10 Miles North Digges Island—May 18th, 1928.

Aircraft "HE" in Upper Left Hand Corner.



Eskimo Igloes—Base "C"—Wakeham Bay. Left to Right—Native, Messrs. Carr-Harris, Laurie and Lawrence.



Base "C"
Condition of Shore Ice in front of Hangars June 18th, 1928.

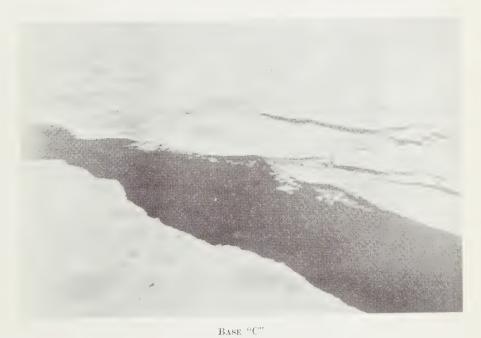


Base "C"—Wakeham Bay—January 27th, 1928—Altitude 2,500 Ft. Hudson's Bay Company Post right foreground.



BASE "C"

Ice in Hudson Strait—Looking Northeast from Fisher Bay—January 27th, 1928.
Altitude 2,500 Ft.



Ice in Strait (Lead)—March 9th, 1928—Looking Northeast—Abeam of Wakeham Bay.
Altitude 2,000 Ft.



Base "C"

Ice formation in Strait—North of Doctor's Island—Entrance to Wakeham Bay—
March 27th, 1928—Altitude 1,000 Ft.



BASE "C"

Inland lake on West Headland, Wakeham Bay, July 22nd, 1928. Altitude 4,000 Ft.



Base "C"

Ice in Strait (Lead)—16th February, 1928—15 Miles Northeast Cape Prince of Wales.

Altitude 2.000 Ft.





Looking Southwest towards Digges Island on flight from Erik Cove to Nottingham Island— May 18th, 1928. Altitude 1,000 Ft.



Base "C"
Looking Northeast towards Big Island—Abcam King George's Sound—July 13th, 1928.
Altitude 3.000 Ft.



Heavy open Ice abeam Akpatok Island—Hudson Strait. July 6th, 1928.



Heavy open Ice abeam Akpatok Island—Hudson Strait. July 6th, 1928.



Large Growler—Abeam Akpatok Island—Hudson Strait. July 6th, 1928.



This Ice Pan varied in thickness from 7 ft to 19 ft. July 7th, 1928.



Heavy open Ice abeam Cape Hope's Advance—Hudson Strait. July 6th, 1928.



Heavy close packed Ice 25 Miles north Cape Hope's Advance—Hudson Strait. July 6th, 1928.



Heavy close packed Ice abeam Cape Hope's Advance--Hudson Strait. July 6th, 1928.



Heavy open Ice—Mid-strait—Abeam Wakeham Bay—Ice in foreground gives idea of depth.

July 7th, 1928.



Heavy open Ice abeam Akpatok Island—Mid-strait. July 6th, 1928.



Heavy open Ice abeam Akpatok Island—Mid-strait. July 6th, 1928.



Heavy open Ice abeam Akpatok Island-Mid-strait. July 6th, 1928.



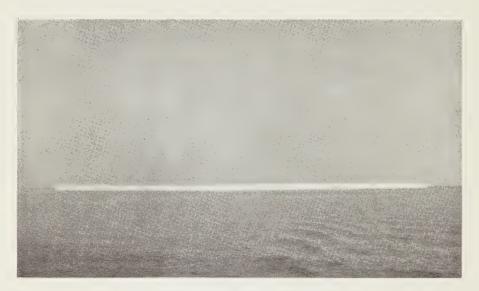
Heavy close-packed Ice—25 Miles North Cape Hope's Advance—Iceberg in distance. July 7th, 1928.



Heavy close-packed Ice—25 Miles North Cape Hope's Advance—Iceberg in distance. July 7th, 1928.



Growler—25 Miles North Cape Hope's Advance. July 7th, 1928.



Large Iceberg—Off Big Island—Hudson Strait—Three-quarters of a Mile long, 60 Ft. high. July 7th, 1928.



Cape Hope's Advance Looking East—Radio Power House in centre on Hill.



CAPE HOPE'S ADVANCE
Radio Power House—D. F. Mast—Shortwave Mast.











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